Ohio Economic Trends Review

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Ohio Economic Trends Review publishes articles about current public finance and economic development issues of interest to state and local government policymakers and administrators, scholars, students, and individuals who monitor the state's economic and financial condition for the private sector.

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Invitation to Authors

Ohio Economic Trends Review welcomes articles advancing the understanding of the economic and financial infrastructure of the state and its political subdivisions.

Articles are reviewed by members of the Board of Editors. No particular approach or research method is favored and manuscripts are invited from all disciplines. Reviewers evaluate manuscripts in terms of the value of the information for the readership, the contribution they make to advancing knowledge about public finance and economic development, and their clarity and quality.

To submit manuscripts and obtain detailed writer's guidelines, contact: Richard G. Sheridan, Editor, *Ohio Economic Trends Review*, The Urban Center, Cleveland State University, Cleveland, Ohio 44115.

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Ohio Economic Trends Review

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Current Trends in Forecasting Revenue: Urban vs. Rural Ohio Counties / page 2

Techniques used by local governments to forecast their revenues can affect economic development efforts in the state. For example, according to Susan A. MacManus and Barbara P. Grothe, "The failure to computerize and use more elaborate, long-term forecasting models will increasingly be a liability to serious economic development efforts in Ohio. This will especially be true in the state's more rural counties...."

The authors, both of the College of Urban Affairs at Cleveland State University, make this observation and others in their article, based in part on a recent study of developments in revenue forecasting among 17 Ohio counties — urban and rural.

Structural Change and Redevelopment Initiatives in the Youngstown-Warren Labor Market / page 8

Three researchers at Youngstown State University — Terry F. Buss, Yih-Wu Liu, and Anthony H. Stocks — show the complexity of the Youngstown-Warren economy, which is "dominated by a few precipitously declining durable goods manufacturers...at risk of further retrenchment."

Their article, the third in a series profiling Ohio's major metropolitan areas, examines the changes in the Youngstown-Warren labor market from 1964 to 1984, as well as the numerous efforts to revitalize the area's economy.

A Muddled Argument: Solving Infrastructure Problems Through Capital Budgeting / page 21

Would adoption of a federal capital budget, or improved capital budgeting techniques at the state and local level, solve the nation's infrastructure problem? Does the very nature of public capital budgeting lead to infrastructure financing problems?

John L. Mikesell and C. Kurt Zorn — both of the School of Public and Environmental Affairs at Indiana University in Bloomington — tackle these questions and others in an effort to bring clarity to the often misunderstood subject of public capital budgeting.

Current Trends in Forecasting Revenue: Urban vs. Rural Ohio Counties

By Susan A. MacManus and Barbara P. Grothe

This research was funded by the Northeast Ohio Inter-Institutional Grant Program. The authors would like to thank the budget and finance officers of the 17 counties for their cooperation in this study.

Overview

Successful public-private partnerships in economic development efforts are increasingly linked to the quality of the local government's fiscal impact analysis, one component of which is a jurisdiction's own fiscal forecast. It is often the accuracy of these self-assessments that establishes the private sector's faith in its public sector partner. Recent research has shown that more technologically sophisticated forecasting models can improve the accuracy of governmental forecasts (MacManus and Grothe, 1986; Dutton and Kraemer, 1985; Donovan, 1985; and Bretschneider, 1986). In this article, we examine the developments in revenue forecasting among 17 Ohio counties* (6 urban; 11 rural) and speculate about the impact of these efforts on Ohio's economic development.

The Urban-Rural Contrast

Based on the U.S. Census Bureau's designations, the counties have been divided into two groups: urban and rural. This distinction enables us to see more clearly the various trends in the level of forecasting sophistication. Contrary to what one might expect, there does not appear to be a significant difference between the fiscal condition of urban and rural counties as measured by available bond ratings.

The major difference is in their relative reliance on external funding sources. Ohio's rural counties are more heavily dependent on external funds (federal, state) than the urban counties. Since external funds are typically among the most difficult revenues to project because of their economic (and political) elasticity, one might expect forecasting to be more difficult for the rural counties. (Table 1 shows a contrast of the revenue intake of urban and rural counties.) One might also expect that the rural counties use less sophisticated forecasting techniques than their urban counterparts, primarily because of the cost factor. The level of technique sophistication will be discussed in terms of frequency of forecasts and revisions, complexity of models, degree of computerization, academic background, diversity of forecasts, level of reliance on the private sector, and extensiveness of circulation of forecasts.

Adoption of Sophisticated Techniques

Frequency of Forecasts and Revisions

The *timing of revenue forecasts* relative to the formal budgeting cycle is reported to improve accuracy (Klay, 1983). In some jurisdictions, the revenue estimate must be certified *before* the start of the formal budget process (departmental budget preparation stage). In other jurisdictions, the revenue estimate is projected during the formal budget cycle. In yet others, a non-binding revenue estimate is generated prior to the budgeting cycle and is revised in the midst of the budgeting cycle in response to both economic and political pressures. For example, it is a well-known fact that forecasters are often pressured by elected officials to revise revenue estimates upward as the formal adoption date approaches, unless major economic downturns appear imminent. The general theory is that accuracy is greatest where forecasts are projected both before and during the budget process. Accuracy may even be further enhanced by using different time frames for estimating different types of revenue (e.g., property tax, sales tax, federal and state aid) and by having more frequent and regular revenue revisions throughout the fiscal year.

The use of multiyear forecasts (for example, three-to-five year forecasts) is yet another example of a more

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**These counties participated in a survey conducted for the Cuyahoga County Board of Commissioners. One of the authors served as a member of the Cuyahoga County Fiscal Processes Task Force.*

sophisticated forecasting system (refer to Public Technology, Inc., 1980; Schroeder, 1982). Multiyear forecasts have two potential downside dimensions that may diminish their use among less affluent jurisdictions. One is an economic dimension: multiyear forecasts are costly (though arguably only in the short-term), which may prevent less affluent counties from engaging in them. Another is a more political consideration. Public dissemination of multiyear forecasts, if positive, can increase wage-related costs in heavily unionized jurisdictions. Conversely, where forecasts are negative, political opponents can "attribute the blame for deteriorating fiscal conditions at the feet of incumbents" (Schroeder, 1982: 125).

As the figures in Table 2 show, Ohio's urban counties are much more likely than the rural counties to prepare revenue estimates both before the formal budget process begins and during the process (50 percent vs. 9 percent). Likewise, the urban counties are more likely than the rural counties to prepare both annual forecasts and multiyear forecasts (33 percent vs. 0 percent). Urban counties are also prone to more frequently and regularly update their forecasts: 34 percent of the urban counties update monthly or quarterly as opposed to 9 percent of the rural counties. Fifty percent of the urban counties (vs. 9 percent rural) use different time frames to forecast different revenues.

Complexity of Models

Model building is a more substantive dimension of forecasting. Models can range from simple univariate to more complex multivariate models. Bretschneider (1985) identifies a number of forecasting models:

- qualitative—no formal data, assessments based on subjective judgment calls;
- univariate descriptive models based on level, trend, cycle or seasonal patterns;
- multivariate predictive models based on the development of formal relationships between variables, analyzed through regression and econometric techniques; and
- combination-of-forecast models utilizing qualitative and quantitative data.

Obviously, computerization (to be discussed in the next section) is essential for utilizing more complex models. But as Bretschneider notes (1985: 12, 14): "The human resources necessary to implement the forecasting process may be a greater investment than the cost of acquir-

Table 1
Fiscal Pressures
in 17 Select Ohio Counties, 1978-1985

	Pop. 1980	% Urban	Revenue 1982 (000's)	% Reliance on External Funds[1]	Fiscal Condition '78	Fiscal Condition '85
Urban						
Cuyahoga	1,498,400	99.7%	$551,086	51%	Aa	Aa
Hamilton	873,224	96.2	242,865	42	Aaa	Aaa
Montgomery	571,697	94.1	176,673	36	Aaa	Aa
Greene	129,769	81.8	34,616	35	A1	A1
Erie	79,655	63.8	29,216	44	Aa	A1
Wood	107,372	57.4	28,452	38	A1	A1
Rural						
Athens	56,399	43.1	11,702	65	A*	A
Guernsey	42,024	38.4	7,660	47	—	—
Wayne	97,408	36.4	16,985	40	—	—
Highland	33,477	34.0	4,078	58	—	—
Champaign	33,649	32.0	10,795	52	Aa*	—
Henry	28,383	30.3	7,769	48	—	—
Union	29,536	25.1	18,081	25	—	—
Darke	55,096	23.6	9,810	44	A1	—
Preble	38,223	17.9	7,987	51	A	A
Geauga	74,474	15.3	19,623	37	—	A1
Paulding	21,302	12.9	8,326	25	—	—

Note: [1] % Reliance is computed: $\frac{\text{Total Intergovernmental Revenue}}{\text{Total General Revenue}} \times 100$

Sources: U.S. Bureau of the Census, *Finances of County Governments, 1982 Census of Governments*, Vol. 4, No. 3, Table 13 (population, revenue).
U.S. Bureau of the Census, *County and City Data Book, 1983*, Table B (% Urban).
Moody's Municipal and Government Manual 1985 and 1978, Vol. 1 and Vol. 2 (New York: Moody's Investor Service, Inc.). (Bond ratings.)
1978 County Yearbook, National Association of Counties and International City Management Association, Washington, D.C., Table 1/1, (Bond ratings with "*").

ing and maintaining the data and utilizing computer resources."

There are some, however, who are not convinced that more complex empirical models produce better forecasts in either the public (refer to Wachs, 1982; Davidson, 1979) or private sector (*Business Week*, 1981). Wachs (1982: 562) suggests that forecasts produced by technical experts are little better than those made by "politicians, clairvoyants, philosophers, or prophets." He questions the ability of complex models to address the problem of assumption drag—the "simple fact that it is often more appropriate to incorporate into a forecast a historical trend than it is to anticipate a future direction from that trend" (Wachs, 1982: 564). He also criticizes most econometric models for being atheoretical—mere "extrapolations and assumptions rather than theoretical models incorporating representations of causality" (Wachs, 1982: 565).

In fact, it may be the *cost* of developing elaborate forecasting models that most deters less affluent local governments from putting them in place, especially if the model has to be developed by outside consultants. The cost factor can be minimized if the models are developed in-house.

The figures in Table 2 show that in Ohio both urban and rural counties more commonly rely on the simple qualitative and univariate techniques (trend and cyclical analysis, incrementalism) than on the more complex predictive forecasting models (regression and econometrics). However, where the complex models are used, they are used by urban counties (33 percent), not by rural counties.

It is difficult for counties to develop econometric

Table 2
Forecasting Activities in 17 Select Ohio Counties: 1985

Activity	% of All Counties (n = 17)	Urban (n = 6)	Rural (n = 11)
Process			
Timing of Forecast[1]			
Before Budget Process Begins	41%	17%	55%
During Budget Process	24	33	18
Both	24	50	9
Time Frame of Forecasts			
Annual	76	50	91
Multiyear	12	17	9
Both	12	33	0
Different Time Frame for Different Revisions	29	50	9
Frequency of Forecast Revisions			
Monthly	6	17*	0
Quarterly	12	17*	9*
Trimester or Midterm	47	50*	46*
Never/As Needed	35	17*	46*
Rigidity of Revision Cycle[2]			
Regularized	24	50	9
"As Needed" Basis	65	33	82
Both	6	17	0
Substantive			
Type of Models (multiresponses)			
Univariate Trend Analysis	88	100	82
Incrementalism	88	83	91
Regression	0	0	0
Econometric	12	33	0
Other	23	50	9
Source of Models			
Developed In-house	94	100	91
Externally	6	0	9
Model Revisions in Last 3 Years	12	33	0
Technological			
Computerization			
Use of Computer in Revised Forecasts	23	33	18
Length of Time Used Computers			
1 Year	25	50	0
2 or More Years	75	50	100
Personnel			
Number of Forecasting Staff[3]			
3 or Fewer	59	66	55
4-9	24	17	27
10 or More	12	17	9
Diversity of Forecasters' Backgrounds (multiresp.)			
Economics	12	33	0
Statistics	12	17	9
Public Administration/Business	53	100	27
Liberal Arts	41	33	45
Distribution of Forecasts (multiresp.)			
Chief Executive Official	29	50	18
Legislative Officials	82	100	73
Budget Officer	53	66	45
Finance Officer	29	33	27
Treasurer	18	17	18
Controller	12	33	0
Departments/Divisions	4	33	45
Other Local Governments	6	17	0
Private Sector	6	0	9
Private Sector Consulted (multiresp.)			
Bankers	6	17	0
Investment Firms	0	0	0
Local Business Groups	6	17	0
Other	6	17	0
Accuracy of Forecasts			
Improved Accuracy in Past 3 Years[4]	88	100	82
Estimated Level of Accuracy[5]			
80-90%	35	17	45
90% or Better	59	66	55

Notes: [1] Two observations are missing: both are rural.
[2] One observation is missing: it is rural.
[3] One observation is missing: it is rural.
[4] Two observations are missing: both are rural.
[5] One observation is missing: it is urban.
*Percentages do not add to 100% due to rounding.

Source: Survey of selected county budget or finance officers, Spring 1985.

Table 3
Economic Variables Used in Property and Sales Tax Forecasting Models: Urban vs. Rural Ohio Counties, 1985

Variable	Property Tax Urban (N = 6)	Property Tax Rural (N = 11)*	Sales Tax Urban (N = 6)	Sales Tax Rural (N = 11)*
GNP				
National	17%	18%	17%	18%
State	0	0	17	0
Regional	0	0	0	0
Local	17	27	17	27
Unemployment				
National	17	0	33	0
State	17	0	67	0
Regional	17	9	33	0
Local	50	9	100	9
Inflation				
National	33	9	50	0
State	0	0	17	0
Regional	0	9	0	0
Local	33	9	33	9
Personal Income				
National	0	0	17	0
State	17	0	17	9
Regional	0	0	0	0
Local	17	9	50	9
Corporate Income				
National	0	0	0	0
State	17	0	17	9
Regional	0	9	0	0
Local	17	9	50	9
Consumer Price Index	17	0	33	0

Note*: Three (27%) of the 11 rural counties did not report data on forecasting models.

models. As Klay has observed: "County governments face some formidable obstacles in trying to develop causal-based revenue forecasting. Little is known about the dynamics of local economies, and historical data for explanatory variables may exist only for larger entities such as the state or nation" (1983: 306).

The data in Table 3 generally confirm Klay's observation. Regional-level variables are the least commonly utilized economic variables among Ohio counties (urban and rural). It appears that even national and state level data are not regularly built into models, a somewhat disconcerting fact in light of the external dependency levels of the state's counties. Characteristics of the population itself (age, race and education) are rarely built into forecasting models by either rural or urban counties (see Table 4). This is reflective of the general reluctance of Ohio counties to use econometric models in forecasting. But the prolonged exclusion of population socioeconomic characteristics in forecasting models will make it extremely difficult to complete the long-term component of fiscal impact studies critical to the development of realistic economic development strategies.

Degree of Computerization

Computerization is the major technological factor associated with more sophisticated revenue forecasting. Like the other factors examined thus far, we expect to find that computerization has been most characteristic of urban counties, which are probably less constrained in terms of equipment and personnel training-time costs than smaller, rural counties.

The same individuals who are skeptical about elaborate econometric models are leary of computerization. Wachs (1982) criticizes computer-based forecasts for presenting false impressions of objectivity to decision-makers. According to Wachs, "Forecasts in most instances are produced by manipulations of computers which are probably understood by relatively few of the people who act on the basis of the results" (Wachs, 1982: 562).

Whether the reason is cost or skepticism, Ohio's urban and rural counties have not moved very rapidly in the direction of computer-based forecasting. As the figures in Table 2 show, only 33 percent of urban and 18 percent of rural counties reported using computers for their revenue forecasting activities.

The failure to computerize and use more elaborate, long-term forecasting models will increasingly be a liability to serious economic development efforts in Ohio. This will especially be true in the state's more rural counties — the very areas most likely to attract *new, large-scale* industrial and manufacturing developments because of available land.

Academic Background of Forecasters, Diversity and Distribution of Forecasts

Personnel-oriented factors related to more sophisticated revenue forecasting include size of the forecasting staff, diversity of forecasters' training, and the extensiveness of input solicitation from, and forecast distribution among, public and private sector personnel. Again, our expectations are that staffing levels are higher, staff backgrounds more diverse, and input and distributional efforts more extensive in urban counties (refer to Weinberg, 1984; Bagley, Borgsdorf and Hudnut, 1982; Stilwell, Gurwell and Kolich, 1982; Coe, 1982).

The results (Table 2) do not show as marked a difference in the size of revenue forecasting staffs between Ohio's urban and rural counties as we had expected. The general pattern of both groups is staffs of three or fewer. The greatest distinctions between the two sets of counties are in the diversity of their staffs' backgrounds, the number of officials to whom forecasts are distributed, and the degree to which private sector input is solicited. Not surprisingly, urban counties are more likely to have at least some individuals with backgrounds in economics, statistics and liberal arts on their forecasting staffs, in addition to individuals with the traditional public

and business administration backgrounds. While the need for the economists and statisticians may be obvious, that of the liberal arts person may not be. The latest hiring trend in response to recommendations by management consultants and departmental administrators is toward generalists. For example, Stilwell, Gurwell and Kolich (1982: 13) advise finance directors to "consider recruiting for broad general competence rather than specific technical skills...." Bagley, Borgsdorf and Hudnut (1982) and Coe (1982) wholeheartedly concur.

The propensity of urban counties to more widely circulate revenue forecasts is also not unexpected. It is consistent with one of Bretschneider's rules of good forecasting (1985: 19): "Never rely on only one expert....Instead pool the expert opinion of several people." (He also advises governments to "avoid the high priced expert...since he [she] will be no more accurate than the less expensive one"!) What is distressing about the results is the low propensity of both urban and rural counties to involve the private sector in either the formation or distribution stages of revenue forecasting. Failure to involve the private sector makes the establishment of public-private sector partnerships all the more difficult to initiate. Yet such partnerships are vital to the success of economic development efforts.

Table 4
Socioeconomic and Demographic Variables Used in Property and Sales Tax Forecasting Models: Urban vs. Rural Ohio Counties, 1985

Variable	Property Tax		Sales Tax	
	Urban (N = 6)	Rural (N = 11)*	Urban (N = 6)	Rural (N = 11)*
Population				
Population Size	83%	18%	33%	36%
Population Growth Rate	33	18	33	18
Age				
Percent Youth	0	0	0	0
Percent Aged	0	0	0	0
Racial				
Percent Minority	0	0	0	0
Education				
Percent College Graduates	0	0	0	0
Housing				
Percent Homeownership	33	9	0	0
Median Value Homes	50	18	0	0
Assessment Levels	83	27	17	9
Poverty				
% Receiving Public Assistance	0	9	17	9
% Below Poverty Level	0	0	17	0

Note*: Three (27%) of the 11 rural counties did not report data on forecasting models.

Summary

This contrast of the implementation of sophisticated revenue forecasting techniques by 6 urban and 11 rural counties in 1985 has shown that urban counties are more likely than rural counties to:

- prepare revenue forecasts before and during the formal budgetary preparation stage;
- revise forecasts with regularity;
- use different time frames for forecasting individual revenues;
- rely on more substantive and analytical forecasting models;
- have their revenue forecasting function computerized;
- have forecasting staffs with more diverse backgrounds; and
- more widely circulate revenue forecasts.

In summary, Ohio's urban counties are further along in implementing more sophisticated process, substantive technological, and personnel-oriented revenue forecasting techniques. These efforts appear to have paid off in terms of improved accuracy. As the figures in Table 2 show, all six urban counties reported their accuracy improved over the past three years (a comparable figure for the rural counties was 82 percent). Two-thirds of the urban counties reported accuracy levels of 90 percent or better, whereas only slightly more than one-half of the rural counties reported accuracy levels that high.

The results of this study, while encouraging, still should be cause for concern among state and local policymakers who want to formulate viable economic development strategies. An overwhelming proportion of the counties studied here (urban *and* rural) still rely heavily on traditional, incremental, short-term forecasting techniques. Fewer than 25 percent have computerized their forecasting activities in even a simple fashion. Fewer still involve the private sector in any meaningful way, either in the development of economic assumptions or in the review of assumptions once completed. In other words, Ohio's counties have not progressed as far as they need to in building the necessary foundation for public-private partnerships.

While sophisticated computer forecasting models are not an absolute guarantee of greater accuracy, they have been shown to be a step in that direction. And there can be little doubt that they play an integral part in the fiscal impact analyses integral to economic development. As Drennan (1985: 3) has so well stated:

> With all of their imperfections and oversimplifications of a dynamic economy perpetually in flux, such models do link all of the diverse parts of the economy into a comprehensible whole. They do not produce ready-made answers but rather provide a framework while making it possible to determine the key linkages within the economy, to sort out some major forces acting upon the economy, and to put quantitative flesh upon the bones of urban [development] theories.

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Structural Change and Redevelopment Initiatives in the Youngstown-Warren Labor Market

By Terry F. Buss, Yih-Wu Liu, and Anthony H. Stocks

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Background

This paper examines the changes in the Youngstown-Warren, Ohio, labor market over two decades — from 1964 to 1984 — and the numerous efforts undertaken to revitalize the economy. In short, it seeks to explain the dynamics of the local economy.

The Youngstown-Warren Metropolitan Statistical Area (MSA) encompasses Mahoning and Trumbull counties located in Northeastern Ohio approximately midway between Cleveland, Ohio, to the northwest and Pittsburgh, Pa., to the southeast. For nearly 50 years, the Youngstown-Warren area was a world center for basic steel manufacturing. To a lesser extent, it also became a center for steel fabricators, non-electrical machinery producers and electrical machinery manufacturers. Only during the 1960s did the region experience substantial growth in another sector, transportation equipment, stimulated by automobile and automotive-parts production. In summary, the Youngstown-Warren area has relied heavily on durable goods manufacturing.

Interestingly, the area never has obtained substantial output or employment in non-durable goods production such as its neighbor to the northwest, the Akron metropolitan area, which specialized in rubber products and later in polymers. This may be due in part to the reluctance of non-durable goods producers to compete for labor with durable goods firms in what has been regarded by many as a high-wage and strong-union area. It is also probable that durable goods manufacturers, dominated by steel producers, discouraged entry. (See Reference 1.)

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Employment Shifts

Table 1 shows average annual employment in the major manufacturing and non-manufacturing sectors of the Youngstown-Warren economy for the selected years 1964, 1974, 1984 and also for Ohio and the United States. Between 1964 and 1974 the number of persons employed locally in all sectors of manufacturing increased except for electrical equipment; while all non-manufacturing sectors experienced growth in jobs. Table 2 reveals, in three of the five manufacturing sectors, that the Youngstown-Warren area had a larger percentage increase in jobs than did Ohio or the United States. Local retail- and wholesale-trade and government employment growth rates also exceeded those for Ohio and the United States. Therefore, the evidence above suggests a relatively healthy local labor market that did not lag behind Ohio or the nation in job creation from 1964 through 1974. As Figure 1 shows, the strong growth in both manufacturing and non-manufacturing employment also supports this assessment.

A much different and discouraging picture of the local economy emerges from 1974 to 1984. Manufacturing employment declined from 92,000 to 55,000, or by 40 percent, in the Youngstown-Warren labor market — a much higher rate of contraction than for Ohio or the nation. Local employment was cut in half in primary metals and non-electrical machinery, and by more than one-third in transportation equipment. These rates of decline exceeded those for Ohio and the nation. A one-fourth drop in construction employment and a 3 percent decline in government jobs was also apparent. While non-manufacturing employment increased by nearly 5 percent, this was far less than comparable growth rates for Ohio and the United States. Thus, while employment was growing by 2 percent in Ohio and by more than 20 percent in the United States from 1974 to 1984, it declined by

more than 14 percent in the Youngstown-Warren labor market. Figure 1 clearly reveals the precipitous drop in local manufacturing during the 1974-84 period. Unfortunately, the growth in non-manufacturing employment was insufficient to offset the loss of jobs in manufacturing.

The volatility of local manufacturing employment is compared with Ohio and the nation for 1964-84 in Figure 2. In general, the local economy manifests more rapid rates of change than either Ohio or the United States in manufacturing employment. This stems from the fact that 90 percent of local manufacturing jobs are in durable goods, which tend to be more cyclically sensitive. Further, as Figure 3 shows, the percent employed in local manufacturing has been consistently higher than in Ohio or the nation.

Thus, with such a high percentage of workers in manufacturing jobs, particularly in durable goods production, the Youngstown-Warren labor market is expected to exhibit greater variation in its employment and unemployment rates compared with Ohio or the United States. This

Table 1
Comparison of Average Annual Employment in the Youngstown-Warren Metropolitan Area with Ohio and the United States: 1964, 1974, 1984[1]
(in thousands)

	1964			1974			1984		
	Youngstown-Warren	Ohio	U.S.	Youngstown—Warren	Ohio	U.S.	Youngstown-Warren	Ohio	U.S.
Manufacturing	75.7	1259.1	17274	92.0	1416.6	20046	55.1	1125.1	19412
Primary Metals	43.1	163.0	1231	45.1	172.4	1505	22.8	108.3	858
Fabricated Metal Products	6.9	153.0	1187	9.8	172.7	1416	8.2	138.2	1464
Non-Electric Machinery	5.8	188.7	1606	8.5	227.7	2218	4.0	167.1	2197
Electrical Machinery	3.6	116.2	1548	3.6	131.4	2030	2.7	92.9	2208
Transportation Equipment	4.6	134.7	1605	13.4	162.5	1821	8.8	145.3	1906
Non-Manufacturing	85.6	1957.3	41057	121.5	2752.8	58367	127.4	3122.9	75049
Construction	6.6	141.3	3050	7.4	172.3	3957	5.5	142.9	4345
Wholesale and Retail Trade	29.0	624.0	12160	42.3	873.8	17017	43.7	976.8	22134
Services	20.9	409.3	8709	31.3	669.7	13617	40.1	903.8	20761
Government	15.7	440.3	9596	23.3	613.1	14177	22.6	654.5	15984
Total Non-Agricultural Employment	161.3	3216.3	58331	213.5	4169.4	78413	182.5	4248.0	94461

[1]U.S. data rounded to nearest thousand.

Source: U.S. data from U.S. Department of Labor, Bureau of Labor Statistics, *Monthly Labor Review*, various issues; Youngstown-Warren and Ohio data from Ohio Bureau of Employment Services, *Ohio Labor Market Information*, various issues.

Table 2
Growth Rates in Employment in the Youngstown-Warren Metropolitan Area (MSA), Ohio and the United States: 1964-84

	1964-74			1974-84			1964-84		
	MSA	Ohio	U.S.	MSA	Ohio	U.S.	MSA	Ohio	U.S.
Manufacturing	21.5	12.5	16.0	-40.1	-20.6	-3.2	-27.2	-10.6	12.4
Primary Metals	4.6	5.8	22.3	-49.4	-37.2	-43.0	-47.1	-33.4	-30.3
Fabricated Metals	42.0	12.9	19.3	-16.3	-20.0	3.4	18.8	-9.7	23.3
Non-Electric Machinery	46.6	20.7	43.3	-52.9	-26.6	-0.1	-31.0	-11.4	36.8
Electrical Machinery	0.0	13.1	31.1	-25.0	-29.3	8.8	-25.0	-20.1	42.6
Transportation Equipment	191.3	20.6	13.5	-34.3	-10.6	4.7	91.3	7.9	18.8
Non-Manufacturing	41.9	40.6	42.2	4.9	13.4	28.9	48.8	59.6	82.8
Construction	12.1	21.9	21.9	-25.7	-17.1	9.8	-16.7	1.1	42.5
Wholesale and Retail Trade	45.9	40.0	39.9	3.3	11.8	30.1	50.7	56.5	82.0
Services	49.8	63.6	56.4	28.9	35.0	52.5	91.9	120.8	138.4
Government	48.4	39.2	47.7	-3.0	6.8	12.7	43.9	48.6	66.6
Total Non-Agricultural Employment	32.4	29.6	34.4	-14.5	1.9	20.5	13.1	32.1	61.9

Source: Computed from data in Table 1.

is confirmed by local unemployment rates, which are much more volatile than those for Ohio or the nation (see Figure 4). Finally, if the nation continues to experience a shift of jobs from manufacturing to non-manufacturing sectors, as expected, this process likely will be more painful to the Youngstown-Warren economy unless a disproportionate number of jobs in non-manufacturing can be attracted.

Hourly and Weekly Earnings

Recent studies indicate that the search by business for manufacturing plant locations has shifted emphasis from energy cost and availability to labor cost, availability and labor climate. The growing international competition in manufactured goods, particularly in the U.S. market, has forced domestic manufacturing firms to trim costs and boost productivity in order to avoid loss of market share. Since unit labor costs are an important portion of the total unit cost of most manufactured goods, it is understandable why firms seek to locate or expand where they can obtain favorable labor costs for the skill level of workers needed for their operations. Surveys of employers in the Youngstown-Warren labor market, undertaken in both 1979 and 1985, indicate that local manufacturers were pleased with the availability and skill levels of workers, but were concerned about the relatively high cost of labor. (See References 2 and 3.) The supply of low-cost skilled and unskilled labor under an amiable labor climate emerges as a critical factor in corporate decisions to expand, retrench or relocate. The Youngstown-Warren region has an abundant supply of skilled and unskilled labor, but has been perceived as a high-cost and strong-union area, an image detrimental to businesses. To what extent are these perceptions borne out by reality?

"This study shows how perplexing the Youngstown-Warren economy actually is: an economy dominated by a few precipitously declining durable goods manufacturers all of which are at risk of further retrenchment."

Table 3 shows the average weekly earnings in non-agricultural employment in 1964, 1974 and 1984 for several manufacturing and non-manufacturing sectors in the local, Ohio and national economies. Table 4 contains comparable data on average hourly earnings. In general, both weekly and hourly earnings for the Youngstown-Warren labor market in manufacturing sectors tend to be higher than their counterparts in Ohio or the nation. However, in non-manufacturing sectors hourly earnings in the local economy appear similar to those for Ohio and the nation.

These conclusions are also evident in Table 5, which shows the ratio of hourly earnings in the Youngstown-Warren labor market and Ohio relative to the nation. With the exception of the electrical machinery sector in 1964, the local-national hourly earnings ratios exceeded one in all manufacturing sectors in each of the selected years. What is more significant is that these ratios appear to be increasing, suggesting that local wages are rising relative

Table 3
Average Weekly Earnings in Non-Agricultural Employment in the Youngstown-Warren Metropolitan Area (MSA), Ohio and the United States: 1964, 1974, 1984[1]

	1964			1974			1984		
	MSA	Ohio	U.S.	MSA	Ohio	U.S.	MSA	Ohio	U.S.
Manufacturing	$133	$122	$103	$236	$226	$176	$556	$464	$374
Primary Metals	139	135	130	248	246	234	571	537	460
Fabricated Metals	128	127	112	267	220	187	589	475	370
Non-Electric Machinery	139	128	122	221	231	208	454	468	387
Electrical Machinery	101	113	102	173	205	166	426	421	351
Transportation Equipment	131	134	130	241	245	220	716	603	491
Non-Manufacturing	NA	NA	NA	159	NA	NA	292	NA	NA
Construction	178	153	132	357	314	249	439	591	457
Wholesale and Retail Trade	87	88	74	111	139	118	217	248	219
Services	63	78	70	131	137	127	281	289	251
Government	NA	NA	106	182	173	NA	335	334	NA
Non-Agricultural Weekly Wage	NA	116	91	194	186	154	386	359	294

[1]All figures rounded to nearest dollar.

Source: U.S. data from U.S. Department of Labor, Bureau of Labor Statistics, *Monthly Labor Review*, various issues; Ohio and Youngstown-Warren weekly earnings from Ohio Bureau of Employment Services, *Ohio Labor Market Information*, various issues.

to the nation's in those manufacturing sectors of historical importance to the Mahoning Valley. This pattern also is seen in Figure 5, which contains the plots of hourly earnings. One factor here may be the loss of jobs by young workers, leaving only higher-paid senior manufacturing workers employed. Also, a tendency to use overtime, rather than hire more workers, appears to be emerging in the local economy's manufacturing sectors. Of course, the data above do not reflect recent wage concessions negotiated in the basic steel sector, or two-tier wage agreements established in other manufacturing sectors, notably transportation equipment. These trends may reduce unfavorable wage-rate differentials. Nevertheless, the perception that local manufacturers experienced a labor-cost disadvantage seems justified. (See Reference 4.)

In the case of non-manufacturing activities, a much more optimistic picture prevails. Hourly earnings for the local economy are competitive with those for both Ohio and the nation (see Table 5). Given a favorable location to service Eastern and Midwest markets and a well-developed transportation network, the Youngstown-Warren area has a competitive advantage in wholesale trade and supportive business services. Growth in these sectors could absorb some of the surplus labor in the region.

The Youngstown-Warren area is not unique in experiencing economic distress as a result of economic transformation. The local economy is unique, however, in at least three ways.

- First, it was the first community to experience a major plant closing in decades.
- Second, it continued to experience major plant closings one after another for nearly a decade.
- Third, it has shown a relative incapacity to create replacement jobs at anywhere near the rate of those lost. Because of these elements, efforts at revitalizing the economy through economic development initiatives, attempted over the past decade, reveal the problems and prospects for managing industrial decline and recovery.

Mahoning Valley: Economic Redevelopment Strategies and Activities

The Initial Response

In the decade preceding the closing of Youngstown Sheet and Tube and other major steelworks in the region, community leaders were repeatedly warned that "big steel" was in trouble and that major plant closings and job retrenchments were imminent. Few community leaders either believed or chose to accept the threatened decline of such a basic industry. Ironically, once the steel-mill closings began in September 1977, community leaders suddenly took a major interest in strategies to reopen them — strategies that taxed the community's energy for nearly three years.

One approach at reincarnation, which dominated the rest during the three-year period, gained national attention. The Ecumenical Coalition of religious and other community leaders attempted to marshal local, state and national resources to reopen the mills under a worker/community ownership scheme. Local residents were asked to contribute by purchasing stock in the venture. Additional capital was sought from investors outside the community. State and federal agencies were asked not only to provide grants and loans of as much as $500 million, but also were expected to subsidize the mills by

Table 4
Average Hourly Earnings in Non-Agricultural Employment in the Youngstown-Warren Metropolitan Area (MSA), Ohio and the United States: 1964, 1974 and 1984

	1964			1974			1984		
	MSA	Ohio	U.S.	MSA	Ohio	U.S.	MSA	Ohio	U.S.
Manufacturing	$3.22	$2.92	$2.53	$5.79	$5.13	$4.41	$12.84	$10.96	$ 9.18
Primary Metals	3.39	3.24	3.11	6.12	5.83	5.60	13.70	12.73	11.47
Fabricated Metals	3.10	3.01	2.67	6.10	5.16	4.59	13.45	11.21	9.38
Non-Electric Machinery	3.05	2.97	2.87	5.17	5.13	4.92	11.46	10.90	9.96
Electrical Machinery	2.22	2.78	2.51	4.44	4.65	4.17	10.28	10.21	9.04
Transportation Equipment	3.20	3.19	3.09	6.09	5.93	5.48	14.12	13.47	12.22
Non-Manufacturing	NA	NA	NA	NA	NA	NA	NA	NA	NA
Construction	4.42	4.04	3.55	9.27	8.43	6.75	12.13	15.38	12.12
Wholesale Trade	3.02	2.58	2.52	4.23	4.37	4.49	8.76	8.65	8.96
Retail Trade	2.07	2.03	1.75	3.04	3.11	3.09	5.75	5.40	5.88
Services	1.74	NA	1.44	3.86	4.15	3.76	8.34	8.68	7.64
Government	NA	NA	NA	4.55	4.33	NA	8.35	8.35	NA
Non-Agricultural Private Weekly Wage	NA	NA	2.36	NA	NA	4.22	NA	NA	8.33

Source: U.S. data from U.S. Department of Labor, Bureau of Labor Statistics, *Monthly Labor Review*; Ohio and Youngstown-Warren hourly earnings from Ohio Bureau of Employment Services, *Ohio Labor Market Information*, various issues.

purchasing their products.

Another scheme, offered by the then mayor of Youngstown, sought to convert idle steel-making facilities into a national steel technology research center. Private steel producers and federal agencies were expected to fund the center.

Experts and entrepreneurs offered many other proposals that would have rehabilitated the mills' departments, making them competitive in the marketplace without requiring an unreasonable infusion of capital.

All of the efforts, with one exception, failed. A local entrepreneur — with management skills, a keen sense of the market and an ability to raise capital in the private sector — was able to acquire the McDonald Works of U.S. Steel and reopen it without public subsidies. This works, which employs several hundred workers, is now the healthiest steel producer left in the area.

With the exception of the McDonald Works, the schemes to reopen the abandoned works seemed to have a negative effect on subsequent revitalization efforts in the area. Many people who had placed such high hopes on reopening were distressed by the failure. This seemed to precipitate a loss of confidence in the community's ability to recover. Even more importantly, the focus on the mills seemed to delay more productive attempts to respond to the closings. In a sense, the community appeared to have been frozen in time for three years. In fairness to those involved in, or supportive of, the various schemes, it should be noted that this region was the first in decades to experience a sequence of closings of this magnitude, so there was little experience to draw from in constructing an appropriate response.

Birth of the Economic Development Corporations

Because not everyone in a leadership role in the area was in favor of reopening the mills in a worker/community ownership scheme, two other responses were set in motion. One was the creation in 1977 of a two-county economic development corporation — the Mahoning Valley Economic Development Corporation. MVEDC, conceived as a public/private partnership with representation from public officials, business leaders and labor, was initially capitalized with state and federal grants used to establish a revolving loan fund. It also served as a "pass through" agency for state and federal project monies, especially those from the U.S. Small Business Administration and U.S. Economic Development Administration.

If MVEDC had a shortcoming, it was the perception that it did not represent all communities in the region. Out of this unrest, local leaders representing five communities — Campbell, Struthers, Lowellville, Poland Township and Coitsville Township — put together the CASTLO Community Improvement Corporation in 1978. CASTLO received grants from the state and the U.S. Economic Development Administration. CASTLO funding has been spent to establish an industrial park on the site of the Struthers Works of Youngstown Sheet and Tube.

Both MVEDC and CASTLO remain in operation. Since MVEDC has now loaned out most, if not all, of its revolving loan funds, much of its work centers on servicing these loans. MVEDC has taken on two additional projects. With funding from the state and contributions of undeveloped land, MVEDC has begun to operate its own industrial park, the Youngstown Commerce Park, through a subsidiary, non-profit corporation. Thus far, one tenant has been attracted to the park.

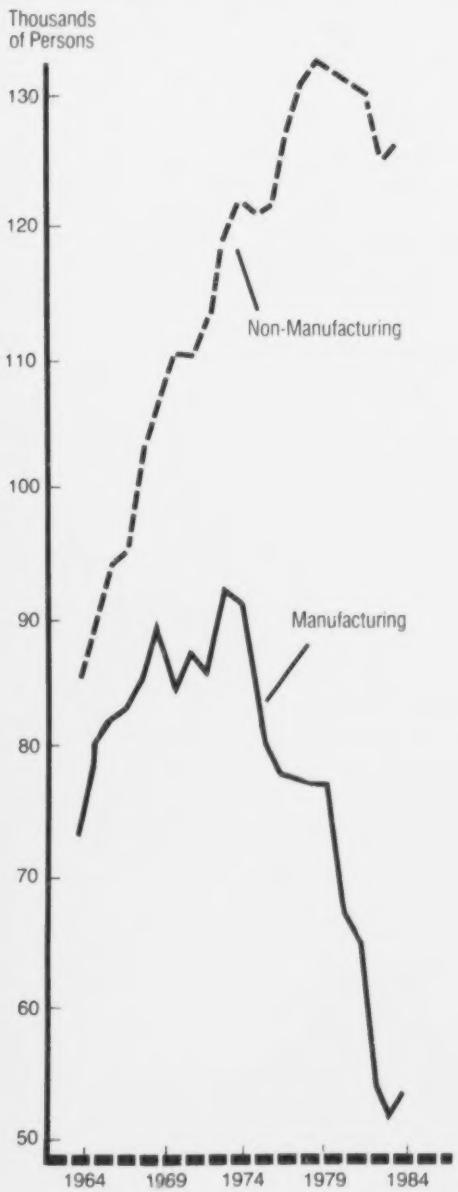
The creation of the Youngstown Park was followed shortly thereafter by the establishment of a second park, the Warren Commerce Park. It currently has no tenants. The other major project involved the acquisition of an unprofitable railroad spur that serviced several viable industries depending on the spur for shipping their products. MVEDC operates the otherwise unprofitable spur to prevent relocation of industries along the track.

Table 5
Ratio of Youngstown-Warren Metropolitan Area (MSA) and Ohio Average Hourly Earnings to U.S. Hourly Earnings: 1964, 1974, 1986

	1964		1974		1984	
	MSA	Ohio	MSA	Ohio	MSA	Ohio
Manufacturing	1.27	1.15	1.31	1.16	1.40	1.19
Primary Metals	1.09	1.04	1.09	1.04	1.19	1.11
Fabricated Metals	1.16	1.13	1.33	1.12	1.43	1.20
Non-Electric Machinery	1.06	1.03	1.05	1.04	1.15	1.09
Electrical Machinery	.88	1.11	1.06	1.12	1.14	1.13
Transportation Equipment	1.04	1.03	1.11	1.08	1.16	1.10
Non-Manufacturing	—	—	—	—	—	—
Construction	1.25	1.14	1.37	1.25	1.00	1.27
Wholesale Trade	1.20	1.02	.94	.97	.98	.97
Retail Trade	1.18	1.16	.98	1.01	.98	.97
Services	1.21	NA	1.03	1.10	1.09	1.14
Government	NA	NA	NA	NA	NA	NA

Source: Computed from data in Table 4.

Figure 1
Employment in Manufacturing and Non-Manufacturing in the Youngstown-Warren Labor Market, 1964-1984



Since its inception, CASTLO has changed its focus very little. Most of its efforts have been devoted to systematically renovating buildings from the old Struthers Steel Works and to clearing the remainder of the site for new development. CASTLO has been successful in attracting a few new firms to the park, although some of these have subsequently gone out of business. The park is filled to 30 percent capacity.

MVEDC and CASTLO are credited with creating or retaining several hundred jobs in the community over the last decade. Possibly because of the attention focused on MVEDC and CASTLO, the last few years have seen the creation of several other organizations pursuing development objectives. Three of these are discussed below.

Emergence of Redevelopment Competition

In 1982, Warren, Ohio, created its own economic development corporation — the Warren Redevelopment and Planning Corporation (WRAP). Of all the initiatives in the region, WRAP has the most comprehensive development program. Unlike the others, it not only has a loan fund, but it also engages in marketing, planning and technical assistance. WRAP has been extraordinarily successful in revitalizing the central business district (CBD) in Warren. Where once numerous storefronts — testimonials to a bygone retailing era — stood vacant, WRAP has attracted new replacement retailers and businesses unthreatened by regional shopping malls and neighborhood shopping centers. Many knowledgeable professionals outside the community consider WRAP to be a model economic development organization.

At about the same time that WRAP began working in Warren, the Youngstown Board of Trade established its own corporation to revitalize Youngstown's CBD. The Youngstown Revitalization Foundation (YRF) was supported through the city's Community Development Block Grant (CDBG) program. YRF has much less well-defined objectives than many other endeavors in the region. Over the past four years, YRF has invested heavily in architectural site renderings or conceptual plans to be used to stimulate development in selected districts or, in some cases, for the entire CBD. This strategy has proved unsuccessful to date because of a lack of private sector investment interest and the prohibitive cost of such projects to the public sector. Only a handful of "deals" have been executed to date by YRF and nearly all these have yet to be implemented. Because of a perceived lack of progress in revitalizing the CBD, YRF now stands at the center of controversy in development politics.

In 1985, the mayor established a competing development group for Youngstown. Citizens and some practitioners with an interest in development met for several months to produce a recovery plan for the city. Because no funding was provided for the project, volunteers completed all of the work. In spite of the good intentions of Task Force members, the plan emerged "still-born": the

business community, mass media and development professionals rejected it as naive and unresponsive to the city's needs. Since its release, the plan has received little attention and none of its recommendations has been implemented.

Rebirth of Regionalism

Recently, a new attempt has been made to develop a regional economic development strategy. In 1983, the Trumbull county commissioners, Eastgate Development and Transportation Agency (EDATA, a federal/state regional planning agency), Ohio Water Service (OWS, a private company providing water to several states including Ohio), and Youngstown State University (YSU) proposed to the Ohio Department of Development (ODOD) a study concerning the development of OWS lake properties as a "green field" biomedical industrial park. Had the study supported the feasibility of developing a biomedical industrial park, OWS would have pursued the project as a private venture through its real estate development corporation. ODOD allocated funding for the study, but the ODOD Regional Office subsequently divided the funds proportionally among four counties. Instead of pursuing the original OWS project, counties were asked to prepare an economic development strategy that was to be merged into a regional plan. The counties were asked to undertake an inventory of vacant industrial sites and to survey local manufacturers, two activities undertaken numerous times in the past by EDATA, YSU and the local chamber of commerce. Funding was not targeted toward identification of major economic development problems and solutions. To date, one county has yet to undertake work on its plan, while the remaining three have used their funding for other purposes. Because of the magnitude of the funding involved, many professionals view this project as a major opportunity lost.

"Even where employment has increased, the region is not benefiting as it should. High wages in manufacturing and the prevalence of union shops have probably discouraged new and expanded business growth in the region."

Important Non-Competitors

It is interesting to note not only those initiatives that have been undertaken, but also those which have not. Three are important. In the local labor market, three Private Industry Councils (PICs) funded by the Job Training Partnership Act (JTPA) have been established. In some communities, PICs have not only pursued their primary mission of training disadvantaged and displaced workers, but they also have participated directly in economic development schemes. PICs in the Youngstown-Warren area have opted out of the economic development arena, perhaps fearing the consequences of adding three more competitors to an already crowded field.

Another organization not participating directly in economic development is the regional planning body — the Eastgate Development and Transportation Agency. EDATA has stuck to its original mission as the planning and review agency primarily for infrastructure projects funded by state and federal agencies. Although it pursues planning on infrastructure projects of critical importance to development, EDATA does not undertake them as a competitor with other agencies. EDATA also does not participate in development finance, marketing or architectural planning, nor does it put together financial deals. EDATA has clearly defined its role.

Yet another organization, the City of Youngstown's Economic Development Office, deserves mention. Established in the late 1970s, the office for most of its tenure participated very little in the economic development effort. It prepared no comprehensive plan, put together few development deals, sought virtually no federal or state monies, and provided little technical assistance to businesses. Apparently, economic development was not given a high priority. Under the Ungaro Administration in the last two years, the office has taken a more active role by participating in development finance projects using Urban Development Action Grants (UDAGs), and in managing a revolving loan fund capitalized from County Development Block Grants (CDBG). Even with these new activities, the office has not engaged in the level of effort common in most other cities. The office has executed no leadership on development issues.

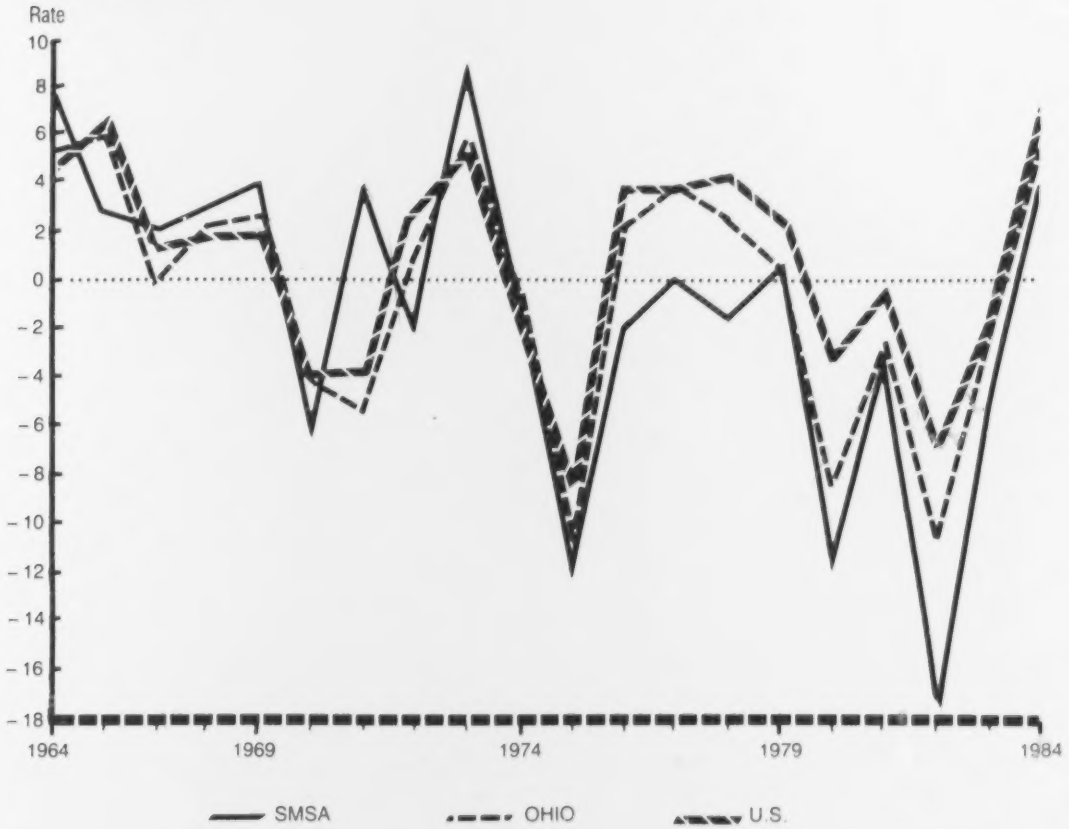
Projects as a Focus

Thus far, this section has looked at the organizational response to the plant closings beginning in 1977. It is also important to review some of the major projects aimed at curing massive unemployment in the community. These projects are of special interest because they have been undertaken by one or more of the organizations discussed above.

From Steel to Aviation. Possibly because the Mahoning Valley was the first region to experience permanent mass layoffs in decades, state and federal agencies wished to demonstrate their support for the area. Agency officials also may have been supportive because they had millions in available funds and were not yet pressured by other communities in need. Without question, the availability of unprecedented levels of public funding for economic development made the region attractive to entrepreneurs.

Ironically, the region did not attract much interest in the basic steel industry or in related metal-shaping indus-

Figure 2
Annual Rate of Change in Manufacturing Employment for the Youngstown-Warren Labor Market, Ohio and the United States, 1964-1984



tries, even though surplus sites and an experienced labor force could be had for the asking. Instead, entrepreneurs from the aviation industry were attracted, first by chance and then by circumstance.

The first company, ICX Aviation, appeared in early 1978. It proposed to develop a $150 million plant to produce the Yak-40 commuter jet, a Soviet licensed aircraft. The facility would employ 4,000 workers. The company, which ironically had no experience in aviation production, failed because it could not acquire production rights from the Soviet Union and investors were not forthcoming.

Following ICX, the Commuter Aircraft Corporation (CAC) was directed to the area under considerable pressure from the U.S. Economic Development Administration in 1979. CAC sought to build a 50-passenger commuter turbo prop plane. The facility would employ about 2,000. In order to capitalize the company, a consortium of local banks and investors loaned CAC $10 million, $4 million of which was guaranteed by the state. A $3.5 million Urban Development Action Grant (UDAG) was provided by the U.S. Department of Housing and Urban Development. EDA guaranteed an additional $30 million in loans. CAC also required public subsidies to train its labor force through the Community Employment and Training Act (CETA) program, a long-term cost estimated at $1 million. From its inception, CAC was plagued with difficulties, the major one being no market for its product. In spite of continuing problems, a $13.5 million facility was built for CAC. Eventually, it became clear that CAC would never

Figure 3
Percent Employed in Manufacturing in the Youngstown-Warren Labor Market, Ohio and the United States, 1964-1984

get off the ground. In 1983, lenders foreclosed on the company, and a few months later the project was defunct.

Because of the new CAC production facility, other aviation firms were attracted as prospects, but none ever occupied the site. These included Amerijet (1981), Advanced Turbo Manufacturing (1983), Israel Aircraft Industries (1983), Wright Airlines (1984), and Avtek Corporation (1985). As was the case with CAC, each of these firms required public subsidies to purchase and equip the facility, in spite of the heavy subsidies already invested in the site.

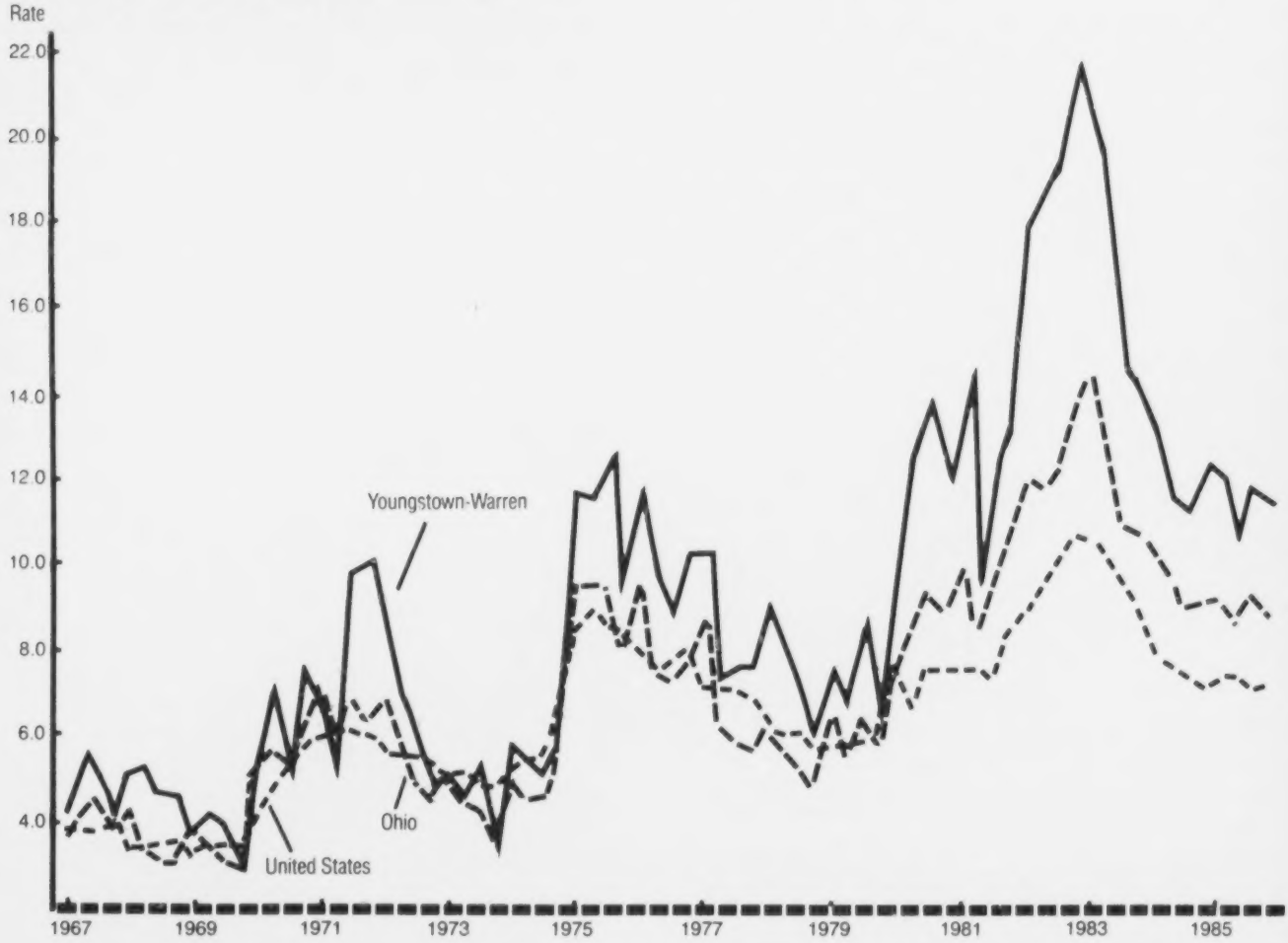
Eventually (1984), a consortium of local banks purchased the site on speculation. Finally, in 1985, a subsidiary of General Motors, Packard Electric, acquired the facility as part of its automobile electrical harness operation. Several hundred workers are to be employed.

The CAC-related projects all were focused on the Youngstown Municipal Airport. Another scheme underway roughly during the same time period involved a proposal to build dirigibles at a smaller local municipal airport. In 1980, American Skyship, a firm owned by a British entrepreneur, attempted to work a deal for a $55 million facility. The blimps were intended for military use, narcotics surveillance, and the transportation of cargo, especially in less-developed countries. In order to make the project work, the firm required: free provision and ownership of land at the airport; a $3.8 billion UDAG grant; a $400,000 HUD site preparation grant; and $10 million in Industrial Revenue Bonds, which the state was to guarantee. The plant would employ several thousand workers. By 1983, the project was dead: the firm was unable to secure orders for its dirigibles or to assemble the necessary private funds. This was not surprising in view of the fact that Goodyear — the nation's premier blimp manufacturer located less than 30 miles from Youngstown — reported that no market for dirigibles existed. Goodyear even rejected a joint venture opportunity.

A Lake-to-River Canal. Since the early 1800s, public officials in this area have promoted the idea of a canal extending from Lake Erie in the North to the Ohio River, a distance of 120 miles. The first intense effort to develop the canal was undertaken by Ohio Representative Michael Kirwan, from the 17th Congressional District, in the 1960s. Kirwan's hopes were shattered when the Corps of Engineers rejected the project in a 1965 study. The plan reemerged in the 1970s, only to be rejected by the Corps and U.S. Congress in 1980. Recently, Ohio Representative James Traficant has revived the idea, apparently excited about the recent opening of the 234 mile-long, $2 billion Tennessee-Tombigbee Canal on the Mississippi River. Traficant's proposal would cost taxpayers about $4 or $5 billion; and, according to Traficant, it would create an estimated 5,000 jobs.

The canal project has not received much support to date. Ohio Governor Richard F. Celeste has offered to put up matching funds for an updated Corps of Engineer's

Figure 4
Quarterly Unemployment Rates in the Youngstown-Warren Labor Market, Ohio and the United States, 1967-1985



study, as long as the Corps agrees to fund remaining costs. Short of this, the U.S. Congress is not expected to endorse such a project in the era of federal budget deficits. Additionally, the powerful railroad and trucking lobbies are opposed to it. Several environmentalists see the project as a disaster. Many of the communities that would be obliterated by the canal are opposed.

Public Buildings. Public buildings and related investments have always been a tool for economic development. What is rare in the Youngstown case is that most of the effort to revitalize the ailing central business district (CBD) has involved public projects with little or no private investment. Some of the key public initiatives are listed below.

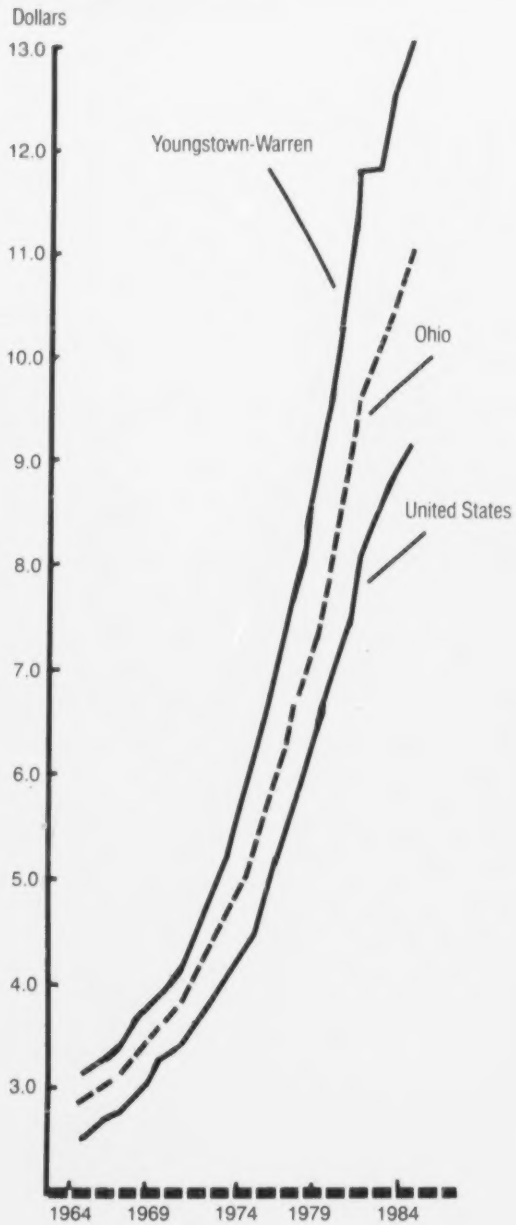
- Urban renewal under the Model Cities program in the 1960s allowed the city to acquire derelict sites, clear them and make them available to developers at low cost. Under this program, large areas of the CBD were leveled. Displaced businesses from these sites were given a subsidy to relocate. Importantly, no restrictions were placed on these relocations so that businesses left the city in droves, leaving few prospects to rebuild on the vacant land. When it became clear that there was a lack of interest in downtown redevelopment, vacant land was made available to private parking-lot vendors who leased the lots at well-below market rates from the city. Thousands of dollars in city revenues have been lost every year because of these agreements.
- In the 1970s, plazas became the rage in many American cities. Cities with congestion and parking problems opted for more efficient mass transit and closed off

streets to traffic. In place of streets, plazas, open public space, fountains and other amenities were added. Youngstown's planners also followed suit. Using Housing and Urban Development (HUD) funding, the traditional square of the city was bricked over and traffic was redirected away from businesses, once heavily dependent on it. In some ways, this also accelerated the decline in the CBD.

- After urban renewal in the 1970s, officials looked for ways to fill the void they had created. During this period, prime sites in the CBD were developed into: a regional post office, two high-rises for the elderly poor, offices for the Mahoning County Human Services Department, and a huge municipal parking garage. All of these projects were intended to bring consumers downtown. Not only were consumers not attracted to the CBD by these facilities, they actually appeared to be deterred in large numbers. Importantly, private investment opportunities on prime sites were precluded.
- Presently, a new wave of public investment has descended on the CBD. The city is beginning to tear out portions of the plaza constructed about a decade ago. One landlord of private property has even begun to rip out portions of the plaza for the restoration of its original features. A regional transfer point for the bus system has been added so that passengers can change buses. A major project to rehabilitate the vacant storefronts and some vacant building interiors in the CBD is planned if $3 million in funding can be acquired. A parking lot, masquerading as a "vest pocket" park, has been added. A museum will be constructed by the Ohio Historical Society this year or next. At one time, the state intended to develop a convention center project for the CBD. The most ambitious project, which has yet to be funded, involves the construction of a large urban park interspersed with retail, office and residential units. Also during this period, at least three different hotel projects, all requiring heavy public financing and subsidies, were proposed but never got off the ground. Finally, the city has sought the construction of a federal courthouse for the CBD, a $10.6 million project. The courthouse would merge 12 existing federal agencies leasing space from landlords of private property into a public building. According to the U.S. General Services Administration, it would be used once or twice a year as a court facility.

  In spite of the millions of investment dollars, no one has prepared any studies of the impact of, or the demand for, these projects in the CBD. Some experts believe mistakes of the past are repeating themselves.
- Also in the 1980s, the city appears to be taking a step backward in its development plans. Recall that the "urban-renewal bulldozer" devastated the city. Now, using CDBG funding, the city is demolishing houses and clearing additional sites. Planners in the city have become enamored with the notion of "land banking." Under this program, the city hopes to hold property for future development.

Figure 5
Average Hourly Earnings in Manufacturing for the Youngstown-Warren Labor Market, Ohio and the United States, 1964-1984



- Although few people have taken them seriously, public projects for the future include: a "park of nations" at an abandoned steel-production site for use by vendors representing different nationalities; and diverting the Mahoning River into the CBD to form a canal *ala* San Antonio.

Ronneburg Brewery. In early 1984, Kosmos Exports of West Germany announced its intentions to build a $30 million brewery in the area. The plant would employ at least 200 workers. In order for the project to proceed, the company asked for and was granted a $9.3 million UDAG, the largest ever awarded. A $2.5 million loan was obtained from the state. About $10 million in Industrial Revenue Bonds was approved. The brewery was offered free land in the MVEDC Youngstown Commerce Park. By 1986, in spite of heavy commitments of public funds, the project was dead. Investors in the project could not or would not provide, or were not adequately advised about, private funding.

An Interpretation of the Overall Effort

The redevelopment efforts thus far have most of the following elements in common:

- *Place vs. people.* Nearly all of the strategies focus on place-specific development issues, such as: industrial parks, CBDs, abandoned mill sites, vacant buildings, and so on. As a consequence, development activity has been targeted on material investments that tend to ignore people. For example, much of the activity, if it is successful at all, probably will not employ many of the steelworkers displaced over the decade. Steelworkers may not have appropriate skills or may not have the desire or temperament to take certain kinds of jobs, especially entry-level, low-paying ones. Disadvantaged people in poor neighborhoods are not likely to benefit from jobs created far from their homes, as there is inadequate transportation for the poor.
- *Supply-side vs. demand-side.* Supply-side factors refer to such things as labor, raw materials, transportation, capital and taxes. Demand-side factors refer to the market in which consumers, government, foreign nations or industries purchase goods and services. Regional efforts to date have focused on the supply-side, with the exception of labor, while virtually ignoring demand-side considerations. For example, the Mayor's Task Force suggested that retail furniture stores might work in the CBD, although no marketing study had been conducted. This suggestion came in the wake of the closing of the last downtown furniture store, an event closely following the closing of three others in a four-year period.
- *Public subsidy vs. private investment.* The private sector continues to make major investments in the region, but these investments are directed away from those areas where the public sector feels compelled to invest. As such, most of the investment in the strategies above has required major public investment and subsidies, with only minimal exposure by, or participation from, private investment. Ever larger sectors of the community are beginning to owe their existence to government. In some ways, the region is becoming a protectorate much like Guam or the Virgin Islands.
- *Short-term vs. long-term.* Many of the strategies, and nearly all of those activities with a project focus, have taken the short-term view to economic development. They all aim at a quick solution to mass unemployment through one or two large development efforts. This is most clearly revealed in comments by public officials that public buildings, even when unnecessary, ought to be built because they create construction jobs.
- *Public vs. private sector leadership.* Although there is considerable activity in the public and private sectors in economic development, much of the "high profile" efforts originate and are promoted by the public sector, or as a so-called public/private partnership dominated by public investment. The impression created is that the private sector has abdicated its traditional responsibilities — responsibilities the public sector has assumed. The inference has been that the private sector is inefficient in producing jobs.
- *Fragmentation.* As implied above, the proliferation of development organizations or individuals pursuing development has led to a fragmented effort at recovery. Each group has its own agenda, which may or may not be consistent with community-wide needs. Fragmentation is not necessarily bad in and of itself. But, in this case, it reflects a divergence of goals in development (a bad situation), rather than healthy competition (a good situation).

Summary

This study shows how perplexing the Youngstown-Warren economy actually is: an economy dominated by a few precipitously declining durable goods manufacturers all of which are at risk of further retrenchment. Unlike many other regions thriving on the diversification of industry in non-durable goods production, the region has been unable to capitalize on potential growth in this atrophied sector. Because of massive unemployment and the dismal prospect for jobs in manufacturing sectors, the local non-manufacturing sectors have not been able to create enough jobs to absorb surplus labor in the area. To make matters worse, the non-manufacturing sectors have not performed as well as those in other urban economies.

Even where employment has increased, the region is not benefiting as it should. High wages in manufacturing (which ironically are continuing to rise even where there is a surplus of skilled and unskilled labor) and the prevalence of union shops have probably discouraged new and expanded business growth in the region.

It is not surprising from an economic development perspective that even those initiatives that have created jobs elsewhere have had little effect on job creation here. Add to this the misdirected and undirected efforts in development, and it becomes clear that the region is in trouble.

An Alternative Path

Community leaders in both the public and private sectors have become increasingly concerned about the lack of progress the region has made in constructing a response to mass unemployment in spite of the major public investments made over the past decade. Out of this frustration, the Youngstown Area Chamber of Commerce and its Regional Growth Association, the Mahoning county commissioners with their Community Improvement Corporation, Youngstown State University, and the Warren Area Chamber of Commerce have commissioned the preparation of a strategy aimed at overcoming the weaknesses of shortcomings of the efforts already in place in the community. This effort will complement the many productive activities pursued by other organizations. More specifically, this strategy is intended to have the following characteristics: it is people-oriented, neutral with regard to supply or demand (except as it relates to human capital), requires very little public subsidy or investment, places the private sector in a leadership role, takes a long-term view, and reduces fragmentation by providing an umbrella under which other organizations can work.

In view of the multiple difficulties of the local economy, all of these characteristics translate into the need for an unprecedented level of entrepreneurial activity. If people wish to work, many will have to create jobs not only for themselves, but for many others as well. Only the passage of time will reveal how successful this effort will be *vis-a-vis* previous initiatives.

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A Muddled Argument: Solving Infrastructure Problems Through Capital Budgeting

John L. Mikesell and C. Kurt Zorn

Overview

Increased concern over the nation's infrastructure has produced considerable dialogue about the extent of the problem and possible solutions. One proposal involves improved capital budgeting techniques at the state and local government levels and the adoption of a federal capital budget. Although some reduction in the infrastructure problem may result from improved capital budgeting techniques, the potential benefits are greatly overstated.

The muddled argument for improved state and local capital budgeting can be traced to a misunderstanding of what public capital budgeting is and how it differs from private capital budgeting. Also, three different concepts are combined under the common rubric of a federal capital budget. Some proponents are arguing for a *true* federal capital budget, some are proposing a national capital budget, and others are arguing for federal capital programming.

Once a better understanding of public capital budgeting has been obtained, it becomes apparent that improved capital budgeting techniques at the state and local level — or adoption of a federal capital budget or both — will not solve the nation's infrastructure problem.

Background

By anyone's estimate, the nation is experiencing an infrastructure problem. Evidence shows slowed or decreased growth rates of state and local capital outlays in recent years,[1] lower growth for state and local public capital stock,[2] and stagnant expenditures on fixed capital investment by state and local governments.[3] Numerous estimates have been made of the level of expenditures needed to avert collapse of existing infrastructures, to replace deteriorated structures and to meet future demands.[4] In all instances, these estimates are sizable.

Citizens experience the problem firsthand as they drive over deteriorating interstate highways, endure mass transit delays, lose water service when mains break, and so on. Ample anecdotes in the press also reinforce the public's perception of the problem.

Professionals, too, have focused their attention on the issue since Choate and Walter brought the problem into the national limelight.[5] In addition, the issue has received substantial attention from federal, state and local government,[6] especially because policymakers believe that sound infrastructure can assist or stimulate economic development.[7]

The infrastructure dialogue has been useful in a number of ways, even though there is not complete agreement about the extent of the problem or the best solution to it.

- First, the dialogue has focused public attention on an area that can be ignored easily in the short run without any direct consequences. Unfortunately, postponement can have dire and very costly ramifications in the long run, but substantial evidence suggests that governments, especially localities, retrench primarily by "delaying capital projects and reducing maintenance."[8]
- Second, attempts have been made to better estimate the present and future infrastructure needs of communities and the nation.[9]
- Third, information about creative capital financing methods for infrastructure financing by states and localities has been widely disseminated.[10]
- Fourth, the development of improved investment planning and investment strategies has been proposed.[11]

This paper focuses on the fourth outcome of the infrastructure dialogue. Although an extensive literature considers the role that capital budgeting can play in ameliorating the infrastructure problem, much of it has been incomplete or even misleading. Claims of relief that either a federal capital budget or improved capital budgeting techniques at the state and local level can provide are overstated. The authors contend that much of that exaggeration emanates from a misunderstanding of the public capital budget and capital budget process.

The following sections define public capital budgeting and the public capital budgeting process; discuss the differences between public and private capital budgeting and the merits of a federal capital budget; and analyze the arguments for improving or changing capital budgeting strategy to solve or significantly reduce the infrastructure problem.

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What Is Public Capital Budgeting?

Public capital budgeting is not easy to characterize because governments use no single, precisely defined approach for capital asset acquisition. Capital budgeting "...lacks clear definitions, organized tradition of inquiry, conceptual boundaries, standard questions, and reliable data sets."[12] Thus, before the merits of capital budgeting solutions to the infrastructure problem can be evaluated, a discussion of the essentials of public capital budgeting is in order.

In theory, the public sector capital budget serves as a guide for government capital expenditure. Items acquired by these outlays provide services for a number of years and typically are expensive and non-recurring. Accountants classify the acquisition of a fixed asset as a capital expenditure. Economists, on the other hand, argue that any expenditure producing both present and future benefits, regardless of whether a fixed asset is acquired, can be classified as a capital expenditure.[13]

Benefit-cost analysis, the closest government analogue to private capital budgeting, embodies the economist's attitude. It applies to both social and capital projects, but is *not* what governments label capital budgeting. Governments generally rely on the accountant's definition when preparing capital budgets; that definition can, unfortunately, bias decisions against intangibles. Teachers' salaries as well as school buildings involve capital formation; the former represents intangible capital formation (more productive humans), while the latter involves tangible capital formation (the acquisition of a physical capital asset) simultaneous with its contribution to the development of intangible capital (more productive humans).[14]

In practice, a distinction must be made between the capital budget document and the capital budget process. The former technically outlines the capital expenditures and the financing of these expenditures for one fiscal year; the latter encompasses a jurisdiction's entire capital improvement program across a number of years. The complete budgeting process varies across governmental units but generally is concerned with:

- the selection of capital projects from numerous agency proposals;
- the timing of expenditures from the chosen projects; and
- the effect on the total finances of that governmental unit of alternative plans to finance those expenditures. A fully developed capital budget system thus includes both planning and finance divisions at various stages in the process.

Preparation of a capital improvement program — a plan for capital expenditures for the next five years or so — initiates the process. Government agencies, or sometimes private organizations, submit project proposals that include cost estimates and narrative justifications for the project. A planning body screens these proposals to evaluate costs, to identify interrelationships among projects and to determine preliminary priorities. This screening process considers project timing in order to avoid waste from premature provision of infrastructure or construction bottlenecks, evaluates to establish whether projects are consistent with program emphases, and identifies what projects might be postponable.[15] When completed, the capital improvement plan will have elements proposed for each year of its life — the capital budget request is the then-current year proposal from the plan.

"...it becomes apparent that improved capital budgeting techniques at the state and local level — or adoption of a federal capital budget or both — will not solve the nation's infrastructure problem."

The process merges the fiscal profile of the government with the projects proposed in the capital improvement program. A faulty financing approach can be as devastating to a government's financial condition as a poorly located facility can be in terms of disruption to the lives of residents in the area; both the physical and fiscal effects of a major project are long lasting, so there is reason for attention to detail. Questions that are particularly critical include: whether there is sufficient cushion in potential revenue over potential expenditure to support new projects; whether existing debt issues are approaching retirement or are otherwise adjustable to allow new debt servicing; what the growth profile of the tax base is likely to be; and what the potential is for diversification to alternative revenue sources.

The resulting fiscal profile can then be compared with the priority schedule of projects arrayed by years to establish feasibility of the plan. This financial analysis usually indicates that not all project proposals can be included in the final budget. When that happens, budget and finance officials establish priorities for funding as directed by the chief executive. Projects may be evaluated using techniques like benefit-cost analysis, but they are more likely to be ranked according to some judgmental priority scale adopted within the budget agency. For example, Wisconsin has used a scale that ranks projects using the following criteria: (1) hazard to safety; (2) full utilization of present facilities; (3) present program expansion; and (4) future program expansion.[16] Projects are included in the capital budget according to their rank until available resources are exhausted; excluded projects compete in later years.

Before capital items are proposed for legislative review and approval, they have been subjected to review for the capital improvement program and for inclusion in the capital budget request. The lengthy impact of such items on community finance and development makes special scrutiny entirely appropriate. Surviving projects for the budget year are then proposed for legislative consideration and often are revised significantly as the capital and operating sections of the total government budget are integrated. The capital section of the budget typically distributes projects by function and agency, reports prior and estimated future project costs, and summarizes sources of financing (type of debt, aid and use of own-source revenues).[17]

While operating expenditures are normally (and properly) financed from current revenue, capital expenditures generally are financed in part on a current basis with own-source revenue and intergovernmental aid and in part by debt. Thus, revenue effort in any budget year must equal the operating budget plus a capital project component, including capital items purchased without debt and the debt service requirements on borrowing for capital items purchased in prior years.

"Public capital budgeting is not easy to characterize because governments use no single, precisely defined approach for capital asset acquisition."

Divergence in Public and Private Capital Budgeting

Because both government and business purchase capital assets, it is tempting to argue that government should adopt techniques currently employed in private sector capital budgeting. Furthermore, failure to adopt those techniques may be taken, by some observers, as evidence of archaic behavior by government. Despite some similarities, capital budgeting techniques used in the private sector are largely not applicable to the public sector because of the different goals, objectives and underlying nature of business and government — the former bases decisions on positive standards (profitability, net worth, etc.) while the latter is involved with normative standards. Failure to adopt sophisticated business techniques often results from the special features of government, not ignorance or incompetence. To fully understand the differences in approaches, it is important to consider several of these features.

Public capital budgeting emphasizes the process — the selection of capital projects, the timing of expenditures and so on; while private sector capital budgeting emphasizes a goal — maximizing profit. Although the private and public processes are similar procedurally, the criteria used to select projects highlight the differences. The private sector uses one or more of the following to compare probable returns from capital investments: payback, return on investment, annual capital charge, net present value, profitability index and the internal rate of return.[18] All of these criteria use easily quantified revenue flows and costs. Furthermore, much attention is paid to the implications that financing mechanisms (changes in the debt-equity ratio, for instance) have on after-tax returns for the enterprise as a whole.

Logically, public investment is desirable whenever the net present value of that investment, discounted at the community's cost of capital, is positive. That principle requires benefits from the capital outlay to be quantified so that the sum of the discounted values of the benefits over the life of the project can be compared with the initial capital cost. That is not different from the probable return focus of private capital budgeting. Unfortunately, public sector valuations must use measures more esoteric than net cash proceeds, profits, etc., because the returns from public investment are difficult to translate into monetary terms.[19] Thus, a criterion that looks similar to the business investment standard differs substantially in practice.

Public services, although valuable to businesses and individuals, are seldom sold. When they are sold, the selling price may not accurately measure the value of that service to society. This fact can be attributed to the non-appropriable nature of the collective goods: barriers to limit receipt of a public service to only those purchasing it are impossible (or prohibitively expensive) to erect, so the service is freely available to all once it is provided.[20] Unambiguous dollar values emerging from market exchange, therefore, cannot be assigned to the stream of benefits — that is, the net present value approach yields partial information for public investment decisions.[21] In other words, protection rendered by a municipal fire department is valuable, but cannot be sold because protection rendered to one structure would protect neighboring structures, regardless of any payment made by them.

That difference in the nature of value-flows from private and public capital assets is a first critical difference between private and public capital budgeting. Because of the difficulties inherent in quantification of public benefits and costs, public sector capital investment decisions often employ other criteria. As was noted earlier, capital projects are likely to be rated according to a judgmental or normative scale rather than a quantitative scale. The use of a normative scale with total disregard to a positive scale is an overreaction to the quantification problem. Some capital investments by the public sector can be evaluated using private sector criteria. For example, determining the value of installing a word processor system — a reduction in operating cost in a department — would not be much different in either the public or private sectors. Some

public investments supported by user charges also can be evaluated using private sector criteria, although social impacts may require adjustments to those charge yields.

Second, government investments typically have multiple goals and objectives. A positive net present value, even if services are reasonably easy to value, may be only one goal behind a public investment decision. Especially important are aesthetics of the community, impacts on the environment and redistribution of community affluence. While the first two may be at least partially reflected in indirect market transaction values, distributional objectives are forever outside the market system. Simply stated, redistribution involves an effort to transfer affluence from the well-to-do to the poor.

A carefully planned capital project can promote the redistribution of wealth through both its physical and financial components. A city may base its decision to construct a community swimming pool more on the desire to provide a recreational facility for low-income families than on the net present-value criterion. By providing the facility and subsidizing its operation, the social condition of the lower-income classes is effectively increased at the expense of higher-income classes who choose not to use the new facility and have their disposable income reduced by the increased taxes needed to finance the pool. Ordinary capital budgeting methods have no method to reflect those objectives in present values, nor do they need to do so because criteria emulating those used in the private sector can only roughly measure the value of the costs and benefits involved. But, by using these approaches, a foundation will be constructed with positive criteria upon which decisions within the political process can be made — decisions taking into account the normative issues. The end result should be a more formal capital budgeting process that withstands scrutiny better than an approach based solely on judgmental criteria.

A third distinction between public and private capital budgeting is the fact that returns to government entities are not taxed. Therefore, the public sector concerns itself with gross returns and pre-tax costs when applying a decision criterion. This is in contrast to the private sector where tax laws concerning capital gains and losses, tax averaging, leasing and investment tax credits influence net-flows resulting from various financing structures for investment projects. Hence, the sophisticated balancing of tax advantages that is so critical in private capital budgeting has no relevance in government capital asset acquisition.

Finally, equity shares and their ownership are undefined in the public sector. There is no "going concern" value for government, no value that would result from sale of the concern, because ownership does not entitle anyone to exclusive flows of profits or other returns. The services of government are not sold, there are no profits generated, and anyone in the service area of the government can be a full recipient of returns from that unit. A physical asset acquired does add to the "value" of the community, but its returns in service, over time, should add more to the "value" of the community than its purchase price. For example, a new firehouse will have a definite book value (related to its purchase price) and an undefined equity value attributable to the intangible and spillover benefits of quicker response time, increased property values in the fire district, and so forth. But, more importantly, ownership does not provide exclusive claim to any value stream. In summary, private sector equity concepts simply cannot be translated to fit the workings of government, and strategy will not be formed on a debt-equity balance.

"The perception that a separate federal capital budget will improve capital investment decisions seems to be based on a misunderstanding of the difference between a capital budget and a capital program."

Putting these arguments together demonstrates clearly that many of the capital budgeting techniques used by business enterprises cannot be easily transferred to capital budgeting in government. First, returns to business capital are clearly definable, while returns to most government projects, which are partly subject to estimation, will have substantial intangible and distributional elements. Efforts to develop a ranked portfolio of public capital projects using some return measure would be foolish. Second, public projects often have multiple objectives, including some that cannot be captured in an explicit value index. Third, business capital budgeting must consider impacts of investment and its financing on tax owed by the firm; governments do not pay taxes. And finally, the equity value for a government is not a meaningful concept. In sum, the lessons that business capital budgeting can teach governments, while invaluable, are not general.

The Case for a Federal Capital Budget

Before embarking on a discussion of the role that capital budgeting can play in solving the infrastructure problem, it is important to review the arguments for and against a federal capital budget. At the same time, it is not necessary to discuss either the practicality or utility of a capital budget on the state and local level because its usefulness at these levels is well established and not controversial.

It has been claimed that a federal capital budget, among other things, is a solution to the nation's capital investment problems.[22] Unfortunately, *federal capital bud-*

get means different things to different people resulting in a muddling of the arguments for and against a capital budget on the federal level. Under the common rubric of *federal capital budget* at least three different meanings can be delineated:

- First, some proponents argue for a *true* federal capital budget that results in a separate document and budget process dealing only with federal capital investments.
- Second, arguments have been made for a national capital budget that would encompass all public capital decisions in the nation. In effect, there's a call for national planning for capital investments and infrastructure.
- Third, some champion federal capital programming, which would result in a regular, organized process for making capital acquisitions at the federal level, leaving the state and local governments on their own.

Proponents for a *true* federal capital budget argue that separate federal operating and capital budgets would enhance federal capital investment decision-making. A recent study by the U.S. General Accounting Office highlighted this point by arguing that a dual budget system could: (1) promote the coordination of federal investment programs; (2) focus attention on the condition of capital assets in the nation; (3) change the perception of the relationship between borrowing for capital assets and the federal deficit; and (4) distribute the costs of capital projects equitably.[23]

"Unfortunately, federal capital budget means different things to different people resulting in a muddling of the arguments for and against a capital budget on the federal level."

On the other hand, the reasons for maintaining the status quo are numerous. First, the federal government is so large that no single project can influence its tax rates. It lacks, for instance, the sensitivity of a city tax rate to a major sewage treatment plant expansion because of the large number of on-going capital projects and the size of the revenue base. Second, it does not require extraordinary physical and financial planning to protect its debt rating. The federal ability to tax broadly and even to print money makes its debt the risk-free standard by which other debt is gauged. Third, any bias toward debt finance in a capital budget could interfere with the stabilization objectives for which the federal government is responsible.[24] Fourth, a federal capital budget would complicate an already complicated budget process. Congress and the President surely do not need another pigeonhole in which to hide budget practices. Fifth, there would be a blurring of budget categories due to the difficulty in distinquishing between operating and capital expenditures. Sixth, separation of the budget would shift the purpose of the federal budget, making physical capital expenditures more attractive at the expense of human capital expenditures.[25]

The last argument needs further emphasis. Although economists agree that public capital budgeting is concerned with any expenditure that produces present and future benefits regardless of whether physical assets are obtained, in practice it focuses on physical assets. Thus, instituting a federal capital budget would constrain the government's flexibility in considering, on equal footing, both tangible and intangible investment decisions.

Considering the case, there is no compelling reason for the federal government to maintain dual budgets. The perception that a separate federal capital budget will improve capital investment decisions seems to be based on a misunderstanding of the difference between a capital budget and a capital program. The former handles capital asset decisions in a process separate from the federal operating budget, while the latter could easily be done within the current federal budget process. In fact, some capital program planning already is being done at the federal level, although it differs from the capital budgeting process being used by lower levels of government.[26] Thus, it seems sensible to better utilize existing capital programming techniques that would accomplish many of the goals championed by advocates of a federal capital budget.

Would a Federal Capital Budget Help?

It has been claimed that a major reason for the nation's infrastructure problem is the lack of a federal capital budget.[27] The argument holds that without a capital budget, the nation is doomed to a short-term outlook concerning its public works needs. Because capital investments are postponable, but also have an easily identifiable physical location, they become an integral part of logrolling politics. In addition, without a capital budget, there is no comprehensive view of the nation's public works needs. This disorder in federal public works makes it difficult for state and local governments to effectively manage their public works.[28]

By instituting a capital budget for the nation as a whole, a number of these problems could be overcome. Ideally, a separate capital budget would clearly identify capital investment needs in the nation, outline investments the federal government would make directly, and inform the state and local governments about the level of federal aid that will be provided to help finance their capital investments. At the same time, public works investments would be classified and the level of government responsible for specific investments would be identified.[29] Unfortunately, there does not appear to be much empirical evidence to support Choate's arguments. As

early as 1969, at least 43 states employed some kind of capital budgeting, yet few would argue that the use of capital budgeting solved or helped avoid an infrastructure problem at the state level.[30]

Under anything but perfect circumstances, any expectation that such a mechanism will answer the nation's infrastructure woes is naive. First, none of the points supports a separate federal capital budget. They do support a formalized capital programming process. While this attack may seem like it is "splitting hairs," it is important to remember that a capital budget is literally a document that outlines the capital expenditures and the financing of these expenditures for one fiscal year. The budgeting process encompasses a jurisdiction's entire capital improvement program. Thus, all of the perceived advantages of a capital budget can be obtained without the drawbacks of a *separate* federal capital budget.

Second, adoption of a national capital budget entails a form of national planning. State and local governments would not be likely to accept this sizable intrusion by the federal government into what has traditionally been a sub-federal set of decisions.[31] Only if the federal government accepted full financial responsibility for the nation's public works programs would state and local governments sacrifice their autonomy. Current trends in fiscal federalism indicate that the trend is toward more state and local fiscal responsibility, suggesting there is little hope for support of a national capital budgeting process. A federal capital infrastructure plan without full federal financing woefully misreads the operating of state and local government, if not the full history of American fiscal federalism.

"The argument that a federal capital budget can solve, or even alleviate the nation's infrastructure problems, has little merit."

Third, it is not clear that a federal capital budget would reduce the political nature of public works investment decisions. The presence of a capital budgeting process and clearly identified investment priorities does not ensure that the process will be less politicized than the current unified budget approach. For reasons previously described, public capital budgeting decisions must occur within parameters that are less clearly defined than those present in private capital budgeting. Both normative and positive criteria enter into many of the public investment decisions. Thus, there is ample room for discussion and disagreement within the executive and legislative branches as well as between the executive and legislative branches concerning the "value" of the projects. Formalizing the process will not eliminate the political nature of the decision.

The argument that a federal capital budget can solve, or even alleviate the nation's infrastructure problems, has little merit. The costs of a federal budget process overhaul to separate operating and capital budgets outweigh expected benefits. While the nation must keep better track of its capital investments and better coordinate its investments, the mechanisms already exist in the current unified budgetary process, but are underutilized. More mechanisms cannot substitute for fiscal authority and political will.

Changing State and Local Capital Budgeting

The present and future threat to state and local infrastructure is unmistakable. The mix among own-source revenue, debt and federal aid financing of infrastructure has changed in the past decade, resulting in increased reliance on federal aid and a marked decrease in reliance on the other two sources.[32] To further exacerbate the problem, the focus of new issues in the municipal bond market has shifted from financing traditional infrastructure, resulting in more expensive debt financing of infrastructure. In 1970, approximately 95 percent of new municipal debt issues were used to finance traditional infrastructure, while in 1982 only 48 percent was used to finance infrastructure.[33] These phenomena can be attributed to the increased use of bonding for housing, industrial development, pollution control, hospitals and student loans.

The state and local infrastructure financing problem must be addressed if there is to be any hope for a solution to the overall problem. There may be room to raise taxes to finance some rehabilitation and reconstruction, but nowhere near the amount necessary will be forthcoming. Traditional debt issues are being crowded out of the market, making debt financing less attractive. Finally, the increased reliance on federal aid is troublesome because expectations about future aid can paralyze current investment decisions and forecasts of future aid may be overly optimistic. If state and local governments expect money to be forthcoming from the federal government, they will tend to postpone capital expenditures in anticipation that the project will be financed through intergovernmental aid. In addition, the present administration is reducing federal aid, implying that expectations of a larger federal role in state and local infrastructure are unrealistic.

Because financing options for state and local infrastructure appear to be limited, it is important to focus on other approaches to reduce the problem. One approach is to explore new capital financing approaches, including deep discount bonds, warrants, leasing and other innovations.[34] A second approach is to reevaluate the way infrastructure needs are assessed, shifting from an inventory approach to an economic needs approach.[35] A third approach is to better utilize existing capital budgeting practices.

"Without changes in the way maintenance expenditures are treated in the budget process, there is little hope for improvements in the nation's infrastructure."

There appear to be a number of improvements that can be made in the capital budget process to enhance the way state and local governments manage and maintain infrastructure.

First, the very nature of public capital budgeting leads to infrastructure financing problems. The capital budget competes in the same arena with the operating budget for scarce financial resources, yet there are marked differences in the two budgets and the processes that lead to preparation of the budget documents. The operating budget generally is the outgrowth of a process that is concerned with a limited time horizon — one year — while the capital budget is the outgrowth of a process concerned with a multiyear time horizon. It is not hard to imagine that this fact places the capital budget at a disadvantage in the competition for financial resources, because its multiyear outlook suggests less immediacy of need and makes it seem more amenable to postponement.

A way to overcome the natural disadvantage the capital budget experiences is to alter the operating budget process so that it incorporates the good points inherent in the capital budget process. It has been argued that the latter is a rational budgetary process and that overall fiscal management would be improved if the former emulated it through adoption of the program budget system.[36] The linkages between operating and capital costs resulting from adoption of a program budget format would reduce the probability that capital expenditures would be postponed in favor of operating expenditures. It would be easier to show the long-run ramifications of capital investment delays because both the capital and operating budgets would be evaluated over a similar time horizon.

Although this solution sounds good in theory, it fails to withstand careful scrutiny in terms of practical merit. In effect, the federal government has a unified budget system that exhibits many of the desired program budget features. Yet, it is hard to imagine that many would accept the contention that the federal government's approach to capital budgeting is noteworthy. In fact, as was noted in the previous section, there have been calls for the federal government to adopt a capital budget that emulates that practiced by many localities. It should be possible, though, to introduce a multiyear cost horizon into operating budgets, regardless of their basic classification.

A second problem with the present capital budget process is the emphasis placed on new construction and the virtual neglect of maintenance and operating expenses linked with capital expenditures. In a recent survey, 94.7 percent of cities using capital budgeting techniques placed new construction in the capital budget, 92.0 percent included rehabilitation and reconstruction, 76.8 percent included major maintenance, and 43.4 percent included preventive maintenance in the capital budget.[37] Although maintenance has no place in the capital budget document because of its recurring nature, it should be an integral part of the process, highlighting the long-run implications of investments in terms of operating and maintenance expenditures. The survey results indicate that many of the responding cities were aware of the importance of maintenance expenditures, yet did not understand the nature of a capital expenditure.[38] Thus, there appears to be room for further education with regard to capital budgeting among practitioners.

Many of the existing infrastructure problems can be linked to the neglect of maintenance expenditures that accompany the purchase of capital assets. Just as items in the capital budget can be postponed easily, maintenance expenditures can be postponed in the operating budget without any noticeable short-run consequences. Without changes in the way maintenance expenditures are treated in the budget process, there is little hope for improvements in the nation's infrastructure.[39]

Third, and most importantly, the very nature of the public capital budgeting process is responsible for the infrastructure problem. Government capital budgeting is highly political, and the politics dilute the benefits of the rational decision-making process. Despite attempts to follow a well-defined procedure to prioritize projects, the fact that normative standards must enter into the choice provides ample room for disagreement and political posturing.

Although nothing can be done to remove politics completely from the process, there is room for improvement. If state and local governments make better and more complete use of the benefit-cost analysis criterion, a number of projects will be removed from the political arena completely, reducing the complexity of ranking those projects not easily subject to the appropriations process. If nothing else, all jurisdictions could reduce the time involved in ranking projects.

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Institute, March 1982).

4. See, for example, Pat Choate and Susan Walter, *America in Ruins: The Decaying Infrastructure* (Durham, N.C.: Duke Press Paperbacks, 1981); Congressional Budget Office, *Public Works Infrastructure: Policy Considerations for the 1980s* (Washington, D.C.: Government Printing Office, April 1983); and Joint Economic Committee, Congress of the United States, *Hard Choices: A Report on the Increasing Gap Between America's Infrastructure Needs and Our Ability to Pay for Them* (Washington, D.C.: Government Printing Office, February 1984).
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6. Evidence of the degree of concern surrounding the infrastructure issue on the federal level is illustrated by studies by the Congressional Budget Office and the Joint Economic Committee, plus creation of the Private Sector Advisory Panel on Infrastructure Financing by Senator Pete Domenici, chairman of the U.S. Senate Committee on the Budget. Activity at the state and local level is best represented by proposals for a Massachusetts Development Bank, New Jersey Infrastructure Bank, and the creation of Indiana Infrastructure, Inc., which is conducting a comprehensive study of Indiana's physical infrastructure and municipal services.
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Ohio Economic Trends Review

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Ohio Economic Trends Review publishes articles about current public finance and economic development issues of interest to state and local government policymakers and administrators, scholars, students, and individuals who monitor the state's economic and financial condition for the private sector.

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Ohio Economic Trends Review

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This special issue of the *Ohio Economic Trends Review* is dedicated to the outgrowth of *Building Partnerships in the Public Interest* — a colloquium designed to foster greater understanding and communication among economic developers, finance officers, academicians and others committed to serving the public.

At the two-day colloquium, nationally known speakers in the fields of economic development and public finance came together with a select group of state and local budget and tax officials, economic developers, economists and political scientists to explore ways for state and local governments to link budget and finance decisions with economic development decisions. From the formal presentations and roundtable discussions emerged a number of valuable suggestions. What follows is a compilation of the major policy suggestions, as well as participants' comments, which have been edited for brevity and clarity.

Also included in this issue are presentations and papers that emerged from the colloquium:

- Clarence J. Brown, former U.S. representative from Ohio and now deputy secretary for the U.S. Department of Commerce, discusses "The Political Realities of Changing Public Policy" (pages 10-12);
- Philip M. Dearborn, vice president of the Greater Washington Research Center, examines "The Effects of Federal Tax Reform on State and Local Governments" (pages 13-15);
- Robert Premus, an economics professor and former director of the Center for Industrial Studies at Wright State University, looks at "Federal Policies and Their Regional Effects" (pages 16-20);
- Richard G. Sheridan, director of the Fiscal Futures Service at Cleveland State University, explores "The Fiscal/Economic Development Linkage in Ohio" (pages 21-33);
- and Roger J. Vaughan, president of a group of economic consultants based in Gray, Maine, asks the question "Do States Have a Role in Economic Development?" (pages 34-40).

Previously published papers presented at the colloquium include: "Toward an Economic-Topographic Map of Ohio: The Seven Largest Metropolitan Areas," by Philip R. Thompson, research associate for the Economic Development Program at CSU's College of Urban Affairs; and "Decentralization and Fiscal Disparities in the United States of America," by Paul R. Dommel, professor and chair of CSU's Department of Political Science.

Building Partnerships in the Public Interest:

A Colloquium from the Public Finance / Economic Development Perspective

At the two-day colloquium* — Building Partnerships in the Public Interest — *nationally known speakers in the fields of economic development and public finance came together with a select group of state and local budget and tax officials, economic developers, economists and political scientists to explore ways for state and local governments to link budget and finance decisions with economic development decisions. From the formal presentations and roundtable discussions emerged a number of valuable suggestions. What follows is a compilation of the major policy suggestions, as well as participants' comments, which have been edited for brevity and clarity.

Session One: Developing Policy Options Based on the Five Paths to Economic Development

Participants:

- *Edward W. Hill,* assistant professor in the Department of Urban Studies at Cleveland State University and research director for the Economic Development Program at CSU's Urban Center.
- *Larry C. Ledebur,* president of Aslan, a group of economic development specialists based in McLean, Virginia.
- *Wilbur R. Thompson,* professor emeritus in the Department of Economics at Wayne State University and former Albert A. Levin Professor of Urban Studies and Public Service at the College of Urban Affairs, Cleveland State University.

Policy Suggestion 1:

Economic development planning should not overlook the importance of government employment.

Policy Suggestion 2:

While state and local government financial incentives to private firms can play a useful role in economic development, these incentives are unlikely to influence locational decisions of firms, as they play only a small role, if any, in these decisions.

LEDEBUR, on locational decision-making:

What has been the emphasis in development policy? It's primarily been (and I would have to say this about most states, most larger cities, many of the medium-sized cities and a lot of smaller places) industrial marketing — that is, having a broad array of very lucrative financial incentives to offer firms to attract them into the local economy.

How effective has this policy been in encouraging development? To evaluate it, we need to look at what the real sources of growth within state and local economies have been. But relocation of industry isn't one of them. I don't think that relocation of industry accounts for more than 1 percent of employment change across state and regional lines. We spend a vast amount of money for industrial incentives, chasing after industry that doesn't really move much anyway.

Industrial incentives are a big regional warfare controversy. The impact of these incentives does not appear to be well understood, however. Unfortunately, the assumption seems to be that almost any economic development policy that has been carefully studied is too long term. Instead a short-term, big-bang political payoff type is favored. For instance, Kentucky is offering industrial incentives, such as land and all the necessary site improvements, and it is planning to pay off the bonds (never admitting that there is interest on the bonds) through the incremental tax revenues that would be derived from new plants.

We did a study to look at what the real costs were going to be to Kentucky for this incentive program in the case of Toyota. We carried out our cost analysis over 20

The colloquium — sponsored by the Fiscal Futures Service at the College of Urban Affairs, Cleveland State University — was held Sept. 25-26, 1986, in Columbus, Ohio.

years because of the bond terms. We then developed a model to estimate the tax revenues that would be derived from the plant over 20 years. The state claimed this would be a fiscal windfall. However, our study showed that over 20 years the surplus revenues, over the cost to the state, would be $17,000, and this was true only in the best case scenario, if Toyota's most optimistic projections were realized. Consequently, the value in providing all these industrial financial incentives is questionable at best, especially in light of the fact that the big site-location firms that we questioned told us that, in their experience, no firm has ever located because of tax incentives or any other sort of financial inducement.

Policy Suggestion 3:

Tax concessions cannot be justified as a stimulus to economic development. Attention should be focused instead on ensuring that the state and local tax structure and rates are competitive.

LEDEBUR, on the importance of taxes:

Taxes are an extremely important issue in development policy. Most important is the tax structure and tax rates. The key is focusing on how to keep the tax structure and rates competitive — not jimmying taxes in all sorts of special concessions that really don't make any significant differences in terms of business or industry location decisions.

When governments get into heavy tax concessions, they get into various propositions that control tax revenues; they begin to erode fiscal capacity instead of doing the things that really make a difference, like developing educational services, roads, highways, cultural amenities and all those factors important to economic development.

Policy Suggestion 4:

Public policy should be directed toward programs that allow entrepreneurs of small- and medium-sized firms to gain access to capital and finance markets.

HILL, on the importance of corporate finance:

The American economy requires a wealth of replacements for businesses at the tail end of their product cycles. The economy demands entrepreneurs and new products — if not necessarily new firms. As Larry Ledebur stated, most growth and stability occurs in locally-managed firms of about 100 to 200 employees: these are the firms most likely to contribute the most to the economic well-being of an area.

I am concerned that the structure of the economy is becoming biased in favor of larger firms — much larger firms. Take for instance, gaining access to finance and capital markets. If you need a large loan, you may have to be a firm with more than $10 million in sales to gain access to the full scope of the financial markets. Financial markets are becoming structured so that it's going to be very, very difficult to be maintained as a closely-held corporation that is profitable but not necessarily large — the type of firm that we need for economic growth and vitality.

Policy Suggestion 5:

Though the payback may not be immediate, public policy should direct financial investments toward rebuilding public and social infrastructure. Particular attention should be paid to urban education.

HILL, on infrastructure and education:

Supply-side economics works in local economic development, but it works in a very special way. Investments in infrastructure and education have to be long-term investments, as they do not show quick payoffs. But they are necessary investments.

Politicians who are involved in making investment decisions in physical and social infrastructure have to deal with the fact that payoffs may not be visible during their terms of office. It is unfortunate that if a project is not politically glamorous — as Wilbur Thompson has said, you can't put a plaque on a railroad bed saying "I'm responsible for fixing the rails" — the investment will not be made.

Politicians and academicians have once again discovered education. It is a critical part of a region's infrastructure, but education is an incredibly complicated product — a product with many dimensions. We currently are experiencing an excellence-in-education fad. What is really important in inner-cities is not excellence in education; it's functional literacy. Regional development cannot be sustained if urban school systems are cynically abandoned, or decline through a policy of benign neglect. Urban school systems are going to have major impacts on urban and regional economic development.

Policy Suggestion 6:

Public policy, especially education policy, should be directed toward fostering "design excellence."

HILL, on the importance of design:

New skills are going to become critical in a consumer-oriented economy — an economy driven not by demand for steel, but for consumer geegaws and gadgets. Older industrial areas, especially where there is

a reservoir of headquarters, can grow by emphasizing excellence in design.

The redevelopment and reindustrialization of Northern Italy is largely based on design. It's supported by relatively cheap labor costs, but it is excellence in design that is spurring redevelopment. Goods manufactured in Italy are purchased because they offer innovations in function and style. The range of manufactured products from Italy is impressive; they include cars, clothing, tile, furniture and so on. The commercial possibilities of innovation in design, packaging and merchandising are nearly limitless. These are attributes that appeal to consumers. The reservoir of talent in New York City — that is, design talent — is very, very important to the future of its development.

Innovation in design by itself does not ensure commercial success. A company must be close to its customers, and it must be flexible before design excellence can become part of a firm's strategic plan. Excellence in design must translate into superior manufacturing and marketing.

Session Two: Developing Economic Policy Options Based on State Taxing and Spending Choices

Participants:

- *Steven D. Gold,* director of Fiscal Studies for the National Conference of State Legislatures, Denver, Colorado.
- *Richard G. Sheridan,* director of the Fiscal Futures Service at Cleveland State University and editor of the *Ohio Economic Trends Review*.
- *Mark L. Weinberg,* associate professor of political science and director of the Institute for Local Government Administration and Rural Development at Ohio University.

Policy Suggestion 7:

State employment growth has been found to be related to wage rates, state-local education spending, the effective income-tax rate, temperature, the percent of employment in manufacturing and per capita income. These factors should be considered in policy decision-making.

GOLD, on factors affecting the employment rate:

Research conducted for the Minnesota Tax Study Commission found the following variables statistically significant in explaining 1973 to 1980 state employment growth in at least three industrial sectors:

- Wage Rates: negative for total, retail trade, finance, insurance, and real estate; positive for services.
- Electricity Rate: negative for retail trade, finance, insurance, and real estate and also for transportation and wholesale trade.
- State-Local Education Spending: positive for total, retail trade, finance, insurance and real estate.
- Percent Change in Tax Effort: negative for total, manufacturing, retail trade and services.
- Effective Income-Tax Rate: negative for wholesale and retail trade and for finance, insurance and real estate.
- Temperature: positive for all sectors, except finance, insurance, real estate and services.
- Percent of Employment in Manufacturing: negative for total, manufacturing, transportation and wholesale trade.
- Per Capita Income: positive for total, retail trade, finance, insurance, real estate and services.

Such results show correlation, not causation. Effects of correlated explanatory variables are difficult to disentangle. Missing variables could change results if included. Results should be regarded as tentative.

(References: Andrew Reschovsky et al., State Tax Policy (Harvard-MIT Joint Center for Urban Studies, 1983); Final Report of the Minnesota Tax Commission, Vol. 2 (Minneapolis: Butterworth, 1986), pp. 51-74.)

Policy Suggestion 8:

Research should be undertaken to determine why companies leave Ohio.

Policy Suggestion 9:

State and local decision-making with respect to public welfare and income/payroll taxes should be coordinated.

Policy Suggestion 10:

State and local decision-making should take into consideration the effects of spending policies on economic development.

WEINBERG, on the importance of state spending on economic development:

Several important policy questions have been raised in recent years with regard to state spending policies. First, what percentage of state funds should be spent on economic development activities in relation to education and social welfare spending? Second, within economic

development spending, are we spending public monies on the right thing, and what other state policies should we pursue in conjunction with economic development spending to promote economic growth?

With regard to the first question, it recently has been argued that states should increase economic development spending, and that they should do this at the expense of social welfare spending, because social welfare spending does not create wealth and acts as a drag on the economy. An example of this line of reasoning is represented in a recent study of the health of the New York City economy from 1975 to 1985. After losing hundreds of thousands of manufacturing jobs, the city's economy improved as a result of diversification of the local economy, and in part due to a conscious shift in local government spending away from social welfare programs to economic development spending. More recently, spending on higher education, a policy actively supported by Ohio's governor and Legislature, has been a crucial element in the economic recovery of the state.

(Reference: Charles Brecher and Raymond D. Horton, "Retrenchment and Recovery: American Cities and the New York Experience," *Public Administration Review* 45 (March/April 1985): 267-274.)

Second, while there has been some shift in development spending toward investment in high-technology and small-business development, most development spending continues to focus on traditional economic development investments. Development of a system of choice to select those investments having the best chance of contributing to economic growth is limited since most state investment decisions are driven by political considerations. One possible exception to this rule in Ohio is the Thomas Alva Edison Program. Also, there has been a resurgence of interest in market-oriented policies, such as the creation of an entrepreneurial environment to stimulate economic growth. A recent study reported in the October 1986 issue of *Inc.* magazine found that Ohio ranked 29th in terms of growth of new business. Arizona, New Hampshire and Georgia ranked highest. The differences were accounted for by the entrepreneurial programs and climates in these states.

(References: Joseph P. Kahn, "Growing Places," *Inc.*, October 1986, pp. 57-67; Review of Ralph Landau and Nathan Rosenberg, (eds.) *The Positive Sum Strategy: Harnessing Technology for Economic Growth*. National Academy Press by Lester C. Thurow, *Scientific American* 255 (September 1986): 24-31.)

Policy Suggestion 11:

The use of tax incentives for business should be limited and, when used, fully justified. Also, as a matter of course, states should monitor and sunset programs justified as supporting economic development.

GOLD, on tax incentives:

If a tax incentive is provided, it should be kept track of — for example:

- Who gets it
- What it costs
- What its effects are.

Knowing the cost — the amount of tax expenditure — that an incentive creates is not enough though. You must also ask how much investment it stimulates relative to the expenditure; we should try to get the greatest payoff for dollar of revenue foregone. Ideally, tax incentives should be "sunsetted," thereby requiring a periodic evaluation of their effects to ensure that the incentives are continuing to provide the effect on development originally intended. (Florida "sunsetted" all of its exemptions for the sales tax.)

Session Three: **Developing State and Local Government Policy Responses to Federal Economic Development Actions**

Participants:

- *Robert Premus*, economics professor and former director of the Center for Industrial Studies at Wright State University.
- *David C. Sweet*, dean of the College of Urban Affairs at Cleveland State University and a member of the Northeast-Midwest Institute.
- *Roger J. Vaughan*, president of Roger Vaughan Associates, a group of economic consultants based in Gray, Maine, and former deputy director of the State of New York's Office of Development Planning.

Policy Suggestion 12:

In formulating policy to stimulate economic development, all state regulatory actions must be examined to determine their economic development effects.

SWEET, on viewing the totality of the regulatory environment in economic development terms:

When you go through the Ohio Revised Code, you can identify hundreds of regulations where state government affects the entrepreneurial climate. These regulatory provisions permeate almost all of the agencies. An inventory should be made identifying these sections of the code and then systematic action taken through the legislative process to modify those sections which could improve the state's overall entrepreneurial climate. Much has been done in this regard; however, much is left to accomplish.

Picking up on Roger Vaughan's theme, as state development director, the most frustrating issue I confronted was that basically the department had no tools, so to speak. State support for economic development results from the state's impact on decisions about actions and appropriations for the Department of Transportation, the Department of Natural Resources, the Environmental Protection Agency, Education and many other state agencies. While the administration that I was a part of was committed to identifying the economic effects of spending decisions, as a peer cabinet member sitting around the table with other directors, one had little clout to mobilize the needed resources and to really focus on the collective economic impact of those spending decisions. The state development director, regardless of who he or she is, sits at a table with a group of peers and has limited direct impact on the actions of other colleagues, yet the budgets for these agencies far exceed that of the Development Department. Fortunately, several of the more recent development programs, such as the Edison Program, have enhanced the role of the development director in this regard.

PREMUS:

I think David Sweet's comment is in line in terms of the importance of the regulatory environment. When I did my survey of high-tech executives, I asked them to rank a series of actions that they thought would be most important in improving the entrepreneurial climates within states and regions. Out of about eight options that they listed, improving the regulatory environment (cutting red tape, as they called it) was by far the most significant action they hoped that states would take. As I probed further into the types of regulations they wanted to see improved, they invariably listed those regulations having to do with the development process. Problems associated with the permit process and getting approvals for architectural designs and zoning were cited most frequently. These were the kinds of regulations that high-tech executives felt needed to be improved substantially because they significantly delayed their ability to get investments in place. So I think improving the regulatory process opens up a real opportunity for a role in government.

Policy Suggestion 13:

A formal mechanism for coordinating state economic development programs, operated in several agencies, should be adopted.

SWEET, on state coordination:

The approach of trying to coordinate the overall economic development expenditures of many relatively independent state agencies, while still focusing on outcomes or on developing coordinated strategies at the state level, is still woefully lacking. This is especially true in education. We as a state spend billions of dollars on education, and the fact is that education is not even formally seated at the cabinet table. The inability of the cabinet officer, responsible for coordinating economic development, to really have an impact on overall expenditures in key areas, such as the field of education, is a serious problem.

Policy Suggestion 14:

There should be a coordinated state-county-city capital plan and budget.

SWEET, on the capital budget:

I think one of the least understood, and potentially most effective, expenditure tools that we have in economic development at the state level is the state capital budget. In Cuyahoga County, I think we have made progress in linking economic development objectives and capital budgeting priorities, and it may be true in other counties as well. Inventories, assessments and implementation strategies — which are critical to our present and future levels of economic activity — are absolutely essential.

What is needed, and what we do not have, is a mechanism (please excuse me if I use the word planning mechanism) that would begin to coordinate state capital activities — you could start at the federal level. But let's just begin with seeking to link state, county and city capital expenditures. There is no mechanism now that coordinates the planning and targeting of these investments. They are done separately — never packaged together to see how one investment might reinforce other investments that are under way.

In Cuyahoga County we've identified $600-million worth of infrastructure repairs and replacements. Local communities have identified sources for $450 million of that amount of needed funding. The question is how will the $150-million gap be closed. That's where there's a great deal of soul-wrenching going on. The county com-

missioners are viewed as the source of funding, by getting the initiative on the ballot to fund the $150-million gap. I think it would be much more constructive for the state to take a leadership role in trying to develop — across all 88 counties — a strategy which would coordinate state, county and city infrastructure investments. This could be done by suggesting, for example, that if in our case where the gap is $150 million, the state would put up $75 million, say, to be matched by $75 million locally if the counties would develop a coordinated strategy and line up their capital budgets against a locally agreed-upon set of priorities. In this way, state money would reinforce county money, and the two would reinforce the city money.

I think the state can play a critical role in providing incentives — that is, "If you don't want to coordinate, then you can opt out." I'm a big proponent of targeting investments to try and enhance outcomes, and this is one of those critical ways that the state could play a role in that regard through capital budgeting.

VAUGHAN:

Obviously, when you are preparing and developing infrastructure, you have to know who the users will be and you have to accommodate large industries. But it's dangerous to undertake too much speculative public investment to attract large businesses. I would like to see all public investment — highway links, railroad spurs or water-supply systems — that are undertaken for specific users to earn some kind of equity return if the facility is particularly successful. I think targeted investments, including those centered around the capital budget process, are very effective tools that the state can use in facilitating economic development.

PREMUS:

I just have two short comments. One is on targeting. The issue is not really to target or not to target: It's simply what do we target? I think the basic wisdom that's emerging around the country on the targeting issue is that we should target the process involved. Roger Vaughan's done a very nice job in outlining what that really means. But it really does lead to a dilemma. If you target the process of development at some point, you have to choose among investments. The capital budgeting dilemma is that choices have to be made. But by targeting the process of development, you're trying to augment the human resource base, and the technological and research base of the state. I think that's a legitimate role of government. The market should be free to optimize the use of these resources for alternative outputs; the government doesn't have to target the output side of the economic development process. But it's still a real question as to how the government uses its scarce resources in its capital budget to optimize its investments.

Policy Suggestion 15:

Economic development education should be provided to children in primary and secondary education.

SWEET:

One of the points that Roger [Vaughan] made was the need to rekindle the entrepreneurial spirit. As he looked at Youngstown, he saw the diminished expectations of graduating students — their expectations about working in the steel mills have been greatly dampened and the question now is: "Where do they go?"

In Ohio, in the primary and secondary schools, we give students little perspective on their future role in the state's economy or any economy. For example, the state requires one-half year of Ohio studies, which are generally historical, during grades K through 8, and for 9 through 12 mandates only American history and government, although some teachers may incorporate some discussion of economic development opportunities into the economics elective some students take. And that's it!

I have become a great advocate of trying to develop a curriculum that looks at the past, present and future of our state and its economic potential. In fact, this should be a required part of the curriculum: Pat Choate's book *The High-Flex Society.* Pat speaks a lot about human resource investment and how we can address that particular issue in making our labor force more responsive to changing economic conditions.

Through stories of plant closings and rising unemployment, we have given students throughout Ohio — and particularly in Youngstown, Cleveland and Northeast Ohio — the image that they have a dim future. What we need to portray is a more positive image of their future in this great state and what some of the specific opportunities will be.

Policy Suggestion 16:

In formulating economic development policy, government should not try to pick winners or losers, or target its resources to particular industries or localities.

THOMPSON:

In a rapidly growing economy, a business begins with a better-than-average chance of making it, because it is in an already rapidly growing system. [*Roger Vaughan:* But it tends to be, that the higher the birth rate of businesses, the higher the failure rate.] I would like to argue a parallel point. Yes, maybe the failure rate is higher, but I'd argue that the failure rate is too low in Ohio. It's too low in

Youngstown. Nobody's taking a chance in Youngstown. The issue is not that we must some way or another prevent failure, but how should a government that's subsidizing business starts handle the problem that a lot of them are going to fail?

I would strongly argue that perhaps Ohio should be prepared to suffer some substantial business failures; minimize them as much as possible, but accept them to get the economy used to taking some chances again. I'm not so sure about the numbers; I'm not sure where the rapidly growing economies are. They certainly don't have higher net failure rates. Rather, their successes are much greater than their failures.

Imagine two places: old-industrial-place A and new-growth-place B. Now in A there are 10 business starts and 10 business failures per unit of time. In B there are 100 business starts and 100 business failures. And let's let the net be zero in both places for a moment. Now, by almost any measure, there's a higher failure rate in B with 100 than in A. But B is in the better position, because it's got more shots at a big success. Place A has little chance of getting a big success and is less likely to attract venture capital. Almost anybody who is in venture capital knows that you write off four-fifths of the money you give out; you're hoping you get a ten-fold return on the stuff that clicks, and that's basically the way you put the numbers in order. The important point to be made is that people in Ohio are not taking risks. There is too much of a fear of failure, so they avoid both business failures *and* creations.

VAUGHAN:

Economic development is essentially a discovery process. Because we don't know what is going to happen, we're constantly trying to find out what the consumers want, how much they value things. You can't guarantee success to firms through public subsidies. Part of the problem some people have with entrepreneurship is rooted in their static view of economic development; they argue that firms may not reach equilibrium. Unfortunately, equilibrium is totally irrelevant to understanding economic development.

If you believe that the consumer judgment is the ultimate test of the value of a project, then competition among entrepreneurs will be the most effective discovery mechanism. But competition has got its advantages and disadvantages. The disadvantage is that some are going to lose. Some entrepreneurs will fail; some established businesses will close. This is a political problem that you've got to confront. You cannot hope that everyone succeeds, because they won't.

The alternative is to have government make the decisions — such as, if we're going to have this type of personal computer or that type of financial service — in which case you're not going to have failure. And you probably will have a much more slowly evolving computer that probably won't quite be what computers are today.

Session Four: Development of State and Local Government Policy Responses to Federal Tax and Spending Actions

Participants:

- *Philip M. Dearborn,* vice president of the Greater Washington Research Center and lecturer in the School of Business and Public Administration at Howard University.
- *Paul R. Dommel,* professor and chair of the Department of Political Science at Cleveland State University.
- *Frederick D. Stocker,* professor of economics and public administration at The Ohio State University.

Policy Suggestion 17:

Cost-benefit analyses should accompany proposals for tax expenditures or appropriations for economic development.

STOCKER, on cost-benefit analysis:

I think it would be a step in the right direction if the state were to require, through legislation, that expenditures for economic development (and especially tax abatements for economic development) be preceded by a careful review of the benefits and costs, including an effort to identify, as well as one might, who the beneficiaries are, what negative consequences there would be and who they will fall on. I think if we just simply encourage a more systematic way of thinking about some of these things we might make fewer mistakes in our economic development policies. And what I heard Roger Vaughan saying is that we have made more mistakes in the conventional economic development policies than we have made wise decisions.

Policy Suggestion 18:

The state should focus its attention on its traditional functions since it cannot really influence state or regional economic development as much as the federal government can.

DEARBORN, on national influences on the economy:

I hate to dredge up old fights, but we need to go back to that orphan report of The President's Commission on the Eighties — back to the people-versus-places type-of-aid discussion. I really think that a lot of good points in that report got misstated and misinterpreted. We spend a lot of resources trying to stem the tide. I'm convinced that the things that are moving our state and local economies are bigger than economic development agencies, bigger than tax abatements — they're bigger than any of these types

of things we might do. There are really major forces at work out there and we don't fully understand how they work. The worst thing we can do is to try to throw something in the way of them and think we're going to alter these big forces.

The first thing we need to do is look to our national economy and determine overall what's in its best interest. We worry too much about which sector in the country and which state is going to come out badly because the national economy is going to move a certain way. We then should go down to the state level and do the same thing. The states ought to be concerned about the overall benefits of the state moving in certain directions and not be as concerned about a Youngstown or other local areas. We have to continue right down the line. It's kind of a "go with the flow" type of thing. Otherwise we will spend a lot of money on wasteful ways, and we will get very frustrated and may inadvertently end up messing up some good things that are happening either nationally or statewide. That may mean the state or somebody has got to say: "Look Youngstown, you just are not making it; the national forces, the state forces are against you." We may have to encourage more young people to leave Youngstown through education and through other means — maybe to even leave Ohio. But you can't hold onto hope that somehow you are going to make Youngstown the high-tech center of the world. That's not the way the world is operating today.

DOMMEL:

Regional changes are not based on regional development policy or a calculation of "here is a growth area." An example is "The Development of the Imperial Valley." The people needed a lot of irrigation out there. There was money to be made, and they hit the federal treasury for aiding that development. It wasn't a federal decision that "here is an opportunity, let us develop agriculture." It had virtually nothing to do with any regional policy. I'm not saying that this is good, bad or otherwise. The federal government operates at the margins of how the economic machine works, where people move, and what regions develop and what regions fall behind.

DEARBORN:

I think there's something to be said that the government's unintentional effects may be much more important than its stated programs. Let me come back to our own situation in the Greater Washington Area; I talked about how many jobs we've increased. It's pretty inescapable that the reason we're doing so well is because the federal government increased its spending in the Washington area by $2 billion a year in recent years. You can't pump $2 billion into a metropolitan area and not have it show up in a lot of new jobs. If you look closely, you find the only states with more new jobs are California, Texas and Massachusetts. The places that are doing well are getting a lot of federal contracts and a lot of federal installations — very real economic development incentives that the federal government is putting out there, but not in any intentional way. You look at Florida and I'm sure if you traced what happened to Social Security — those huge increases we got in the '70s — they contributed to the prosperity of Florida. It made it possible for masses of elderly people to go down there and set up housekeeping.

If you look at another situation, kind of the opposite side of the coin, in a lot of our central city neighborhoods, people have not been doing very well in the '80s. I think a lot of that is traceable to the fact that food stamps, Aid to Dependent Children and other income-transfer programs other than Social Security have been going down in real dollars. The spending power isn't there; there's nothing to power those inner-city economies. Maybe what we ought to do is increase food stamps and income-transfer programs. These might be the best economic development incentives we could give to try to get some shopping areas back. But the question I was leading to is: what is the extent to which state governments should take the lead with regard to economic development through decisions about their non-economic development policies? Where a state locates facilities, where it purchases things, and its programs of where its money is going for welfare, for agricultural programs — these may have major effects on local economies.

STOCKER:

We ought to be thinking about federal policy, as well as the state and local policies, that makes the intended beneficiary of the program better off, and not worry so much about shaping the programs in such a way that they are designed to pump up some geographic area. I'm not saying that we should stop thinking about what public policy is going to do to local development, but that local development should not be allowed to become the primary objective.

The Political Realities Of Changing Public Policy

By Clarence J. Brown

Good afternoon. It is a pleasure to be with you today—and an added treat to be back in Ohio.

The link between economic development and public policy or public finance—the topic of this colloquium—is both timeless and timely. Timeless because earliest examples of writing—that of the Sumerians in the fourth century B.C.—deal with this very subject. Timely because the relationship between economic development and public finance—a vital issue to Ohio's current condition—is being basically altered as we meet.

My charge today is to consider the political realities of changing public policy. So let me define political reality as the amalgam of current personal attitudes, parochial interests and economic possibilities which combine to advance or retard our joint efforts in fostering the common good.

Political reality is in constant change and it operates differently on different levels—at the micro, or community level, as well as the macro, or global level. An invisible chain links the micro to the macro, and political reality is always in flux along the full length of that chain.

Today I want to consider the widest dimensions of political reality—dimensions that are outside the conventional talk of the imperatives of Gramm-Rudman-Hollings, the era of tighter federal budgets, increased taxes in Ohio and looser budgets at the state level. I have chosen five examples.

Power and Diminishing Returns

First, the latitude for the use of power—both military and economic—in the world has been sharply curtailed in recent decades. Two reasons for this come to mind. In an age of potential total destruction, the nuclear age, power reaches a point of diminishing returns, especially as more nations achieve nuclear capability. Similarly, in an era of interdependent economies, the use of economic pressure carries the risk of unforeseen secondary effects which all too quickly boomerang back on those who apply it.

At the state level, at least in Ohio, I doubt that use of the National Guard—except in the most extreme circumstances—is as likely as it was before Kent State. And in the economic sphere, certain lures—like tax abatement—are no longer as effective as they once were because everyone uses them. But, though no longer as effective, they are still used because they are so common. And the reverse is true. Some economic policies are so deadly that they are being changed or limited. Consider the wave of Tort Reform, product liability limitations and insurance cost issues sweeping the country in the wake of high judgment costs in claim cases. In Ohio, the double jeopardy in Workmen's Compensation comes quickly to mind.

At the national and world level, the result of these facts is that America does not have the same unconstrained ability to shape world political and economic events that we once enjoyed.

This is fundamental. We have seen evidence of it the past years in the world oil situation where OPEC has enough production to set the price; in steel where world demand has slowed to drop prices below U.S. levels of efficiency; in agricultural talks with the Europeans where European Community food surpluses have changed them from customer to competitor; across the whole spectrum of our trade with the Japanese, and even in areas like computers with Brazil. Other nations will no longer accommodate the United States simply because we're the big boy on the block—biggest producer and biggest consumer. And it's hitting us where it hurts most—in our pride and our pocketbook.

New Technologies

The second changing political reality I would cite is that new technologies have altered the base of economic growth. The classical economists talked of land, labor and capital. Today it's capital, knowledge and innovation—social, technological and managerial.

The Japanese are the primary example. Not much land. Almost no natural resources. But they produce 10 percent of the world's output. Japan took the watch industry away from the Swiss, the optical lense industry away from the Germans, and we all know only too well what they've taken from Ohio, Michigan, Pennsylvania and elsewhere.

Why? They save their earnings and generate capital by consuming less and investing in modernization of plant and equipment at twice the U.S. rate. They educate their children in a way that gives their graduating high school seniors the equivalent of at least one more year of learning than our high school seniors have. And they have a capacity for social innovation—management technique—that has created an industrial relations environment not matched by any other nation.

So while, yes, there are endless evidences of non-tariff barriers that restrict foreign imports, the underlying

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Japanese social approach is geared to competing with an intensity and sophistication unknown in Europe and America.

Other nations have learned the lesson of the new economics from Japan. Korea, Taiwan, Singapore are all examples of nations not greatly endowed with natural resources—other than their people—but, nevertheless nations which have created their own comparative advantage.

That is the model of the future—the careful assessment, determination and use of comparative advantages. And, as computer-telecommunications networks give businessmen and engineers in all nations instant access to production techniques and financial markets, we shall see this model copied more and more. Keep an eye on India in this respect.

Another political reality which is the result of technological change: In an integrated, worldwide system of finance, production and marketing, no nation has sovereign control over its own future. Decisions made in Bonn, Tokyo, Riyadh or Mexico City affect jobs, costs, production techniques and tax rates in Cleveland or Cincinnati only somewhat less than do decisions made in Washington.

The United States has been urging both Germany and Japan to stimulate their economies to consume more. Why? Because economic growth in Pittsburgh or Portland depends to some degree on the expansion or contraction of the Japanese and German economies—at least more than was the case a generation ago.

In a world where the Dallas Area Rapid Transit Authority floats a $90-million bond issue backed by Japan's Mitsubishi Bank or where American companies dip into the London Eurodollar market (which turns over $300 billion every working day), what is the meaning of M1, M2, M3 and the Fed's effort to control the expansion of credit?

Creation of Wealth

The fourth political reality is that a worldwide shift of economic emphasis is under way—a shift from the redistribution of wealth to the creation of wealth. This shift of emphasis is seen in the wholesale dismantling of centrally controlled production and the fostering of private initiative. The most striking example is China, which is issuing stocks for the first time in over three decades, and where dividends are being paid to worker-shareholders. But it's not just China. In Britain, the government has sold more than $11 billion in state assets. Italy's huge state conglomerate, IRI, has sold more than $1.5 billion of assets. Turkey's government plans to "privatize" 32 state enterprises. Mexico plans to sell, close or merge 482 state companies. Even Bangladesh has privatized some 30 jute mills and 20 textile mills. Remember, some of the economies are smaller than Ohio's.

The message is clear. As the world moves toward the 21st century, a centrally controlled economy, with its rigidities and lack of competition, cannot succeed in a world economy characterized by interdependence, rapid technological innovation, and the need for swift decisions.

Economic Freedom

The final reality is the increasing evidence of the link between economic growth and political and economic freedom. This has been obvious to America for a long time, but it is only now becoming obvious to much of the rest of the world.

For example, a recent Princeton University study concludes that Third World democracies are less likely to incur the crushing debt loads that affect many Third World authoritarian countries. The democracies have been able to achieve respectable rates of economic growth with greater income equality than authoritarian states. The tendency of democracies to incur lighter debt loads makes their economies less vulnerable to outside shocks, while their greater income equality suggests broader markets and more even development. For Third World newly developing countries, Japan is the model for achievement and the United States is the goal.

"Public policy must also become concerned with the content of education — education that fosters entrepreneurship."

A more dramatic example of the assessment of the link between economic growth and political freedom is China. I've already talked of China modernizing her economy. But the truly remarkable development is the beginning—and I emphasize it's only a start and could go either direction—of discussion about political reforms some Chinese say must take place if economic modernization is to succeed. Concepts such as "checks and balances" are beginning to be discussed. There have even been fleeting murmurs on how to make the Communist Party more democratic. Don't expect China to become a parliamentary democracy in your lifetime. But at least it's a straw in the wind.

Where does all this leave us in our assessment of the political realities of changing public policy? How does this affect Akron or Toledo in their need to link economic growth and public finance?

I offer one primary thought. Given the scope of the changes we've talked about, the key to effective public policy is understanding and exploiting this new entrepreneurism. The entrepreneur is the role model for the future.

When I talk of the entrepreneur in this sense, I'm speaking of the de-institutionalization process that is changing both business and government. We all know about the de-institutionalization of U.S. business—where the "Fortune 500" companies have created no net new

jobs, and where new and/or small companies have been creating more net new jobs each month than the European Community has created in the past decade.

In the same way, in the U.S. government we've seen the shift away from massive federal programs to solve our social problems, to solving these problems on a local basis. It makes little difference as to one's personal or political view—whether the preferable solution to social problems is public monies or private jobs. The fact is that there is an operational shift away from a federal tax and regulatory system which offers increasing social protection with its attendant restriction on individual economic choice, to an incentive-based economy which rewards a person's additional work, savings and investment. Authority and responsibility are shifting from the federal to local levels and from government in general to the individual.

Public policy must more completely understand and manage this shift—a shift from large to small, which is taking place in education, health, and even in penal institutions. The primary object of public policy must be to encourage entrepreneurship. All else, no matter how seemingly humane or egalitarian, is secondary simply because entrepreneurship is the source of future economic growth which finances social benefits. We must not forget the lesson of the 1970s. When technology is changing everything and making competition global, no government program, no matter how well intentioned, creates jobs or wealth or security. Individual choice and action, as this decade is so stunningly showing, are the indispensable links to a secure and prosperous future.

As information (knowledge and its use) has become a raw material of economic growth, public policy must also meld research and development to the potential growth areas of your community. Communities need technology policies as part of their economic development policies. We've seen this work in a place like Massachusetts, which lost major industries—textiles, watches, shoes and brass foundaries—yet now has an unemployment rate considerably below the national level. But with the vast number of the universities we have in Ohio, why can't Ohio become a pattern for future collaboration between university research and development, financial institutions and economic growth policies? Battelle and the Cleveland Medical Center show us what we can do.

Public policy must also become concerned with the content of education—education that fosters entrepreneurship. Education needs rethinking simply because we're at a point where we need a new understanding of what it means to be educated in a world where all knowledge will soon be available at the press of a button. Yes, we need to talk about merit-pay, longer school years, greater parent participation, tougher science and math requirements, and all the rest. And, yes, we need to look at who wins the Westinghouse science prizes and why.

But what about education that fosters the essence of entrepreneurship—the readiness to take risks, an intuitive sense of what might be done, an urge to *do* something in life rather than simply the desire to *be* something or just to survive. So many of our young people want to *be* a CEO, *be* successful, *be* rich and famous; but not many of them know what they want to *do* in terms of creating something new in life. The motor force of entrepreneurship is the will to achieve something tangible as a result of my efforts. I suspect that if our education imbued our youth with that feeling, our competitive problems with Japan and other nations would shrink rapidly.

Public policy must also concern itself with management of more local, sometimes smaller, institutions—whether businesses, universities, hospitals or government, for management is a major determinent of economic growth. Do not take the question of management for granted. Look at the best managed organizations in America—whether private or public—and compare their performance with those in your region. As a profession, management is changing as fast as any profession in the world. The growth of your community may depend on the competence of your managers. See how to ensure they are on the cutting-edge of their profession.

These, then, are some of the political realities of changing public policy. There's much I haven't mentioned today—Congress, the prospects for post-Reagan America, shifting political attitudes. These are all, obviously, essential. But then, these too are shaped by the larger political realities we've only briefly touched on today.

The Effects of Federal Tax Reform On State and Local Governments

By Philip M. Dearborn

Tax reform legislation passed by Congress will have important implications for Ohio. First, it will directly affect the Ohio personal and corporate income taxes, which are automatically tied to the federal tax base. Second, it will remove some major tax expenditures that have indirectly provided millions of dollars in aid to governments and businesses in Ohio. Each of these major effects will be examined in more detail. I will then give you some of my general observations about the overall effects of tax reform.

Tax Conformity

The federal tax package will result in federal tax reductions for most taxpayers, but the effect on their state income taxes may be very different. Indeed, for some residents state taxes may increase by one-fifth or more, unless the state acts to prevent such increases.

At present, Ohio uses the federal tax base as a starting point in calculating its income taxes. Because federal tax reform eliminates tax shelters and makes more income subject to taxes, the broader federal base will, under present arrangements, increase area residents' income subject to state taxes. The principal items causing this broadening will be:

- Increasing capital gains subject to tax from 40 percent to 100 percent;
- Eliminating IRA's; and
- Eliminating the marital deduction.

Because Ohio maintains its own personal tax exemptions and tax rates, when the present rates are applied to the larger base that is created, state tax revenues and taxes on residents will be increased. The state will potentially receive a windfall of many millions (probably in excess of $150 million) from increased income tax payments by some residents. The federal government, of course, removed its potential for such a windfall by increasing personal exemptions and sharply reducing rates.

What will Ohio do about its potential windfall? One possibility would be to stop conforming to the federal law and keep the existing IRA and other federal provisions for state taxes. This means the state would uncouple from the federal tax base. If the state ignores the federal tax changes and develops its own independent tax structure, it will end the relatively simple federally-based state income tax forms that residents now use. Few policymakers are likely to take this option seriously because of the taxpayer dissatisfaction that would ensue, to say nothing about the serious administration and compliance problems that such nonconformity would cause.

Moreover, there is little to gain by not conforming. Because the federal income tax is so large relative to a state's, it is federal and not state law that largely dictates peoples' tax decisions. An apt analogy is a small boat (a state) following a large ship (the U.S. tax). The smooth path is set by the large ship.

But selecting the conformity option means the state government will either have to justify higher taxes or reduce its rates sufficiently to give back the windfall. The temptation of increased taxes without any need to vote to raise rates will be tempting to elected officials. This course should be rejected. Political accountability requires that tax increases result from documented budget needs, not merely from the accident of federal tax reform.

"Political accountability requires that tax increases result from documented budget needs, not merely from the accident of federal tax reform."

Nonetheless, giving the windfall back to taxpayers will present difficult problems for the state. The federal tax changes are complex, and it is not always clear how they will affect state taxpayers. In addition, some federal changes will be phased in over several years.

The state faces three basic options:

- First, rates can be reduced by the same percent for everybody. At first glance, this appears to be pretty straightforward. But that is not the case. Why? Because the federal tax changes are largely eliminations of special provisions used by middle- and upper-income persons (e.g., deductions for individual retirement accounts, real estate passive loss provisions, and 100-percent capital gains recognition). Thus, an analysis of state taxpayers will probably show that by adopting the federal law (based on my analysis of the effects in Washington, D.C., Virginia and Maryland) the increase could be 15 to 18 percent for

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middle-income taxpayers and much higher for those with capital gains.

On the other hand, most lower-income taxpayers would experience no increase in state taxes. An equal rate reduction would have the effect of shifting state tax burdens from lower- to higher-income families. If all states act together in this manner, the outcome is not necessarily bad. But if one state acts alone to change income tax burdens, it may hurt its ability to compete for income and jobs with other jurisdictions.

• This leads to the second option: Return the windfall to those from whom it came. This will not be a politically easy task. Because it is the higher-income taxpayers who have the larger state tax bites, while lower-income taxpayers and "non-itemizers" would have little or no additional state tax liability, the rate reductions would have to be greatest for those in higher brackets. Thus, while this solution has merit in terms of interstate competitiveness and as an attempt to make a fair determination of who should get relief, it creates a perception that the state is giving tax breaks to high-income residents at the expense of lower-income ones.

"Most observers feel that capital-intensive heavy industries, such as those in many of the older industrial areas in Ohio, will feel the worst effects."

• A third possibility would be to use the windfall to correct existing tax inequities or other problems. The money could be used, for example, to eliminate state income taxes on very low-income residents just as the federal government is doing.

In addition to the overall problem of how to resolve the windfall issue, there will be a special need to examine the state tax on capital gains. At present only 40 percent of capital gains profits is counted as taxable income for federal and state taxes. With tax reform, 100 percent will be included.

This means that the Ohio rate on capital gains will go from a maximum of 3.23 percent (40% × 8.075%) to 8.075 percent (100% × 8.075%), if no change is made. In short, the Ohio tax on capital gains would increase by 150 percent. While the 3.2-percent rate probably had little effect on locational decisions, an 8-percent rate could leave Ohio in a difficult position relative to states with no tax, or ones that act to keep the rate relatively low.

Nevertheless, keeping the rate low will not be technically or politically easy. It will mean singling out capital gains of wealthy taxpayers for special tax relief.

The corporate income tax effects are more difficult to predict based on available information. Despite a reduction in the maximum federal rate from 46 percent to 34 percent, it is estimated that $120 billion more will be raised from corporate taxes over the next five years. Thus, there is again a substantial base broadening as a result of changed depreciation, elimination of investment tax credit, elimination of tax shelters and other changes. It's extremely hard to estimate how this will affect state tax yields, but an Ohio increase in excess of $100 million seems possible.

The effects of these changes will be heavily dependent on the type of business and the use of various tax avoidance measures in the past. Most observers feel that capital-intensive heavy industries, such as those in many of the older industrial areas in Ohio, will feel the worst effects. Service-type businesses may feel very few effects. If this is so, the state may be put in a position of increasing state corporate taxes on a large, but fragile portion, of its business tax base. This potential problem will need immediate and careful attention. Not only may the state not want to let these taxes increase, but it also may want to reduce state taxes on sensitive businesses to offset the federal increases.

Tax Expenditures

Federal grants through the tax system

Tax reform will repeal the deductibility of state and local sales taxes from individuals' taxable income. This provision has provided several billions of federal aid to state and local governments by making the sales tax burden less onerous on taxpayers who itemize than it would otherwise be. The principal effects of this change will probably be to make sales taxes less popular as a revenue source than they have been in the past.

A second indirect subsidy to state and local governments and their businesses will be repealed by the elimination of tax exemption on bonds issued for most private purposes, and by limitations on the amount of tax-exempt debt that can be issued for some governmental purposes.

While the exact provisions of the law covering tax-exempt bonds are murky and complex, and will provide bond counsels great delight in interpreting them, a few general features can be highlighted.

First, bond issues for clearly governmental purposes remain fully tax-exempt. These cover such facilities as schools, highways, fire stations, courthouses, prisons, and so on.

Second, bonds issued to benefit substantial private activities (more than 10 percent or $15 million of the issue) will not be tax-exempt, unless specifically authorized by the new law.

Third, bonds for some quasi-governmental activities and a few private activities will be limited in the amount that can be issued annually.

This point requires some elaboration. Bonds under the cap include:

A. "Exempt-facility bonds," which are those issued for:

1. Multi-family residential rental projects for low-income residents
2. Airports
3. Docks and wharves
4. Mass commuting facilities
5. Sewage disposal facilities
6. Solid-waste disposal facilities
7. Electric energy or gas facilities for local service
8. Water facilities
9. Heating or cooling facilities
10. Hazardous waste facilities

Specifically excluded are:

1. Sports facilities
2. Convention or trade show facilities
3. Airport hotels and retail, office or manufacturing activities not directly related to airport services
4. Industrial park developments

B. Private purpose bonds, including:

1. Small issue IDB bonds for manufacturing can be issued through 1989.
2. Student loan bonds continue to be exempt.
3. Mortgage revenue bonds are continued until December 31, 1988.

Volume limit is $50 per capita or $150 million ($75 per capita or $250 million in 1987), whichever is greater for all except general government bonds, and airports, docks and wharves, and government-owned solid-waste facilities. This is about $540 million for Ohio in 1988 and years thereafter.

In addition to the restrictions on use of tax-exempt bonds, there are also tightened restrictions on arbitrage earnings and refundings, and all bonds issued under the cap are limited to 2 percent of proceeds to cover cost of issuance.

General Observations

• Tax reform will cause a lot of uncertainty and confusion regarding state income taxes, revenue estimates and tax-exempt bond financings. States may have to make some changes in laws on fairly short notice; the federal law generally goes into effect January 1, 1987.

• State tax competitiveness may be sharply altered as a result of many states adjusting their personal and corporate income tax structures and rates at the same time. The existing tax equilibrium between neighboring or competing states may be shattered.

• Low-income residents in general, and the working poor in particular, will receive the most significant tax reductions—even if the state's actions don't parallel the federal government's. This will decrease some pressures on state income transfer programs, and will increase purchasing power in low-income areas—both urban and rural.

• Goverment aids to development by use of tax-exempt bonds will be severely limited. General use of such incentives by most states and localities probably means that governments' relative competitive positions will be little changed.

• However, the sharp drop in the corporate tax rate will make incentives that reduce business costs (tax abatements, land write-downs, low-interest loans) more important. With rates at 46 percent, the corporate profits after federal taxes only received a 54-percent benefit from such cost reductions; this will change to a 66-percent benefit.

• The favorable tax incentives for office, hotel and multi-family residential development has been pretty much eliminated. Depreciation goes from 19 years to 27.5 years for residential rental and 31.5 years for commercial. This may dampen some of the central city building booms that have persisted despite weak demands.

• Interest rates on municipal bonds may be lower because of smaller supply and limitations on other tax shelters. These favorable factors will be somewhat offset by lower marginal rates, inclusion of interest on non-governmental tax-exempts in minimum tax, and disallowance of interest used to carry bonds.

Federal Policies And Their Regional Effects

By Robert Premus

Regional policy is concerned with ameliorating problems associated with regional disparities in income and welfare. Development policy attempts to indirectly deal with the problems by improving the economic performance of regional economics. Revenue sharing, public works and income security programs are ways the federal government attempts to directly reduce regional disparities.

The federal government provides subsidies to assist businesses in low-income and lagging regions in the hope of creating jobs and expanding the local tax base. State and local governments are also directly involved in the provision of public incentives to encourage business development. The main question to be determined in regional development policy is the proper role and level of government involvement. This report addresses current political dialogue on these regional issues. The report rejects traditional targeted regional policies and suggests new directions for federal regional policy.

The report begins by discussing the current dialogue on regional policy, followed by a discussion of U.S. regional policy in a historical perspective. The report concludes with suggestions for new directions in U.S. regional policy.

Current Political Dialogue

U.S. regional policy is an endangered species. The line of supporters for an active federal role in regional development grows shorter each year. The Reagan administration's position is that regional economic development is primarily a state and local government responsibility. In fact, political conservatives question the direct role of government in regional development at any level of government, at least as it has been practiced in the past. From their perspective, the free market allocates resources efficiently among communities in much the same manner as it allocates resources among industries. Competition is the appropriate regional policy since it provides an efficient basis for determining which industries and communities grow and prosper and which stagnate and decline. Except where there is a clear-cut case of market failure, government should not attempt to interfere with industry and regional development patterns. According to this view, an interventionist regional policy will result in slower national economic growth and development.

Political conservatives view regional policy as another liberal program to redistribute income; they hold a similar view of the Federal Revenue Sharing program. Successful regions must be taxed to finance what amounts to income transfer payments to less successful regions. In the 1950s, the Southeast and the Southwest regions lagged behind the industrial North in economic development. However, in today's economy, the discrepancies in affluence among the major U.S. regions are largely absent.

The predominate view among regional experts is that interregional income equalization has occurred as a result of market forces, not because of regional policy. The rapid rise of the Sunbelt economy and the relative decline of the Frostbelt economy eliminated much of the liberal political support upon which federal regional policy was based.

Political conservatives also question the methods and practices of regional policy. The goal of most regional development strategies is to create jobs by offering locational incentives. Most states provide industrial loans, loan guarantees, interest subsidies, tax abatement, regulatory relief, and new infrastructure investments to attract industry.

Many studies have shown that locational incentives do not stimulate economic growth. Since all 50 states offer roughly equivalent incentive packages, the net effect of these programs is neutralized. In fact, since one firm's subsidy is another firm's tax, the net effect is more likely to be a decrease in business expansion and job opportunities.

Moreover, as stated, market forces have resulted in a convergence in real per capita income among the U.S. regions. If there are no poor regions, there is no basis for federal intervention. Of course, there are pockets of poverty within regions, but, because these pockets of poverty are localized, they are best dealt with through state and local policies. Of course, the federal government has responsibility for the poor through income transfer programs. Federal income transfer programs directed at individuals provide a minimum floor on the level of affluence in distressed towns and regions. If poverty levels are unacceptable, the answer from a federal perspective may be to increase income support programs. Maintaining an adequate "safety net" is an alternative to increased federal support for regional development. Moreover, federal development aid to communities, rather than to individuals, benefits the wealthy in these communities, as

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well as the poor. Income security programs minimize this distributional inequity.

In the 1960s and 1970s, when regional policy was at its zenith, the prevailing economic development philosophy was based on the belief that public works projects create jobs and that industrial incentives attract industry. In recent years, these beliefs have been challenged. Economic studies have consistently argued that regional public works projects cannot create permanent jobs for the whole economy. If they are financed by taxes or debt, the result will be less long-run job growth in other sectors. The net effect of ill-conceived public works projects may actually be a less dynamic economy and a lower rate of job creation and development. The essential point is that public works projects should be planned in terms of their long-term strategic value to the regional economy—not because of their short-term effects on job creation.

Nevertheless, the belief that public works projects create jobs is still alive in Washington, but its influence is waning. The 1983 "Jobs Bill" passed by Congress allocated an additional $1 billion for public works to create jobs. This bill, supported by the House Democrats, is predicated on the belief that new federally-funded projects are necessary to reduce the nation's unemployment rate. However, by adding to the federal deficit, the impact of the "Jobs Bill" is more likely to be an increase in real interest rates and less investment and job creation in other sectors of the economy.

The premise that firm location choices are readily influenced by industrial incentives also has been challenged. State industrial recruiting programs are invariably based upon the belief that locational grants make a difference in firm location choices. There are several challenges to this view. First, studies have shown that relocating businesses account for only a small portion of regional economic expansion and employment growth. By focusing industrial incentives on relocating firms, regional policy can have only a minimal impact, if any, on regional development. Moreover, to the extent that industrial incentives do have an impact on regional development, they primarily redistribute the nation's industrial base among regions. One region grows at the expense of other regions. Most analysts agree that federal government policy ought to discourage beggar-thy-neighbor policies.

Second, studies of job growth have shown that small businesses create a large portion of the new jobs in America, yet industrial incentive programs are usually targeted to big, relocating firms. Most new economic growth comes from small businesses and service firms within the existing economic structure of a state or region, and not from relocating plants and businesses. By focusing on relocating manufacturing plants, traditional state and local development programs have been out of tune with the major source of economic expansion and job creation.

The wisdom of industrial targeting schemes also has been criticized in the economics literature. The belief that industrial development planners can select the right private-sector investments for a region was at the heart of the recent industrial policy debate in America. A major criticism of targeted industrial policies is that industrial incentives were generally directed to established businesses with substantial political influence.

Probably the most devastating blow to the traditional development philosophy is the impressive volume of empirical studies that have found that state development programs have little impact on regional economic growth. The only argument advanced by defenders of the traditional approach is that industrial incentives are necessary as a defensive strategy to neutralize the effects of incentives provided by other states and regions. This argument hardly provides a solid philosophical basis for a continued federal role in regional economic development.

'The main question to be determined in regional development policy is the proper role and level of government involvement.'

Historical Perspective

Regional policy was formally introduced into the United States in the early 1960s. The Appalachian Regional Commission (ARC) was established in 1965. A hybrid organization, the Economic Development Administration (EDA), was also established in 1965. A number of multi-state Title V planning regions were set up under EDA, such as the Ozarks, New England, Coastal Plains and Upper Great Lakes regions. In the early years, ARC's annual budget was over $200 million. The EDA spent approximately $1.3 billion over the first six years of operation. Today the budgets of these federal agencies have been substantially reduced. ARC and EDA each receive less than $200 million annually.

A criticism of the ARC and EDA is that they placed excessive emphasis on public works to create jobs. ARC spent the largest share of its funds on highway development. EDA provided loans and grants to help finance roads, waterways and public facilities.

Most critics of regional policy argue that public works projects are only a temporary source of construction jobs to a community. Unless public works projects provide long-term services that are valued by the community, operating and maintenance costs will create a fiscal drain on future generations. As stated, public works projects ought to be planned for the long-term strategic value for the community, not for temporary employment effects.

Also, very little emphasis was placed on human resource investments and community development in regional policy. Economic development was perceived primarily as public works projects and industrial recruiting. There was very little coordination among economic, human resource and community development programs at the federal, state and local government levels. Practically no attention was given to the region's overall climate for entrepreneurship and innovation.

The 1970s

In the 1970s, regional policy began to address the problem of human resource development, but major emphasis on public works and industrial recruiting continued. Development planners began to see the need to connect economic development and manpower training programs, since the availability of trained labor was a barrier to expansion in lagging regions. Nevertheless, emerging federal policy began to drive a sharp wedge between employment training and economic development programs. The Comprehensive Employment and Training Act (CETA) program treated government as an employer of last resort. CETA became a mechanism to find public service jobs at the state and local levels.

The 1980s

In the 1980s, the CETA philosophy gave way to the Job Training and Partnership Act. Under JTPA, workers are trained for private sector jobs. To be effective, JTPA requires close coordination between the private sector and suppliers of training services. The growth of customized training programs at the state- and local-government levels reinforces the view that job training is an important dimension to regional economic development.

In the early 1980s, a new dimension to regional economic development swept America. The "state high-tech movement" represented an awareness that technological innovation is an important, hitherto neglected, dimension to regional development. Under the high-tech banner, states began to view higher education as an important economic development resource. University policies, research and development, technical schools, patent policy, technology transfer, venture capital, research parks, and entrepreneurial development began to enter into the dialogue on regional economic development.

The high-tech movement also brought attention to the central role of the entrepreneur in the economic development process. Entrepreneurs bring new and improved products and processes to market. Since new products and processes have greater value than those that they displace, entrepreneurial expansion invariably results in net wealth and job creation for society and its regions.

Traditional regional policy is inappropriate for entrepreneurial development. First, industrial recruiting is useless since new entrepreneurs are almost always spawned from within the region. A region's entrepreneurial supply function depends on the level and diversity of its labor markets, incentives for risk-taking, and community attitudes that condone wealth-seeking. Second, entrepreneurial start-up companies benefit less than large established firms from public works projects.

Entrepreneurial development is a dynamic process that evolves through a number of business development stages. Barriers to entrepreneurial development can occur at the start-up, early expansion, rapid expansion, mature and declining phases of development. Public works projects and industrial incentives are designed to aid existing business, not the development of new business.

The current emphasis on entrepreneurial development is causing state and local governments to look inward to find ways to improve their climate for entrepreneurship and innovation. Government provides a number of important inputs into the entrepreneurial development process—skilled labor, research, tax policies and regulations. Through their tax, expenditure and regulatory activities, state and local governments, if they choose, can directly influence the overall regional climate for entrepreneurship and innovation. A primary role of government in the entrepreneurial development process is to identify barriers to entrepreneurial development and to develop the necessary programs and strategies to remove or overcome these barriers. For example, by providing entrepreneurial inputs that are inadequately supplied by the private sector, such as research and education, regional competitiveness can be enhanced.

Technological barriers may be the most significant strain on entrepreneurial development in lagging regions, such as Appalachia. The shift in the structure of the American economy away from raw materials-oriented industries has had a crippling effect on the Great Lakes and Appalachian regions. Unless new technology is developed, raw materials- and manufacturing-based economies will have to rely upon other industries, such as high-tech and services, to prosper. The strategic question to ask is whether or not lagging regions, such as Appalachia, possess the necessary social values, cultural environment, education quality, and living environments to attract

"The current emphasis on entrepreneurial development is causing state and local governments to look inward to find ways to improve their climate for entrepreneurship and innovation."

high-tech and service industries. The image of being out of the mainstream of American cultural life may be a significant barrier to entrepreneurial development in some regions.

The central point is that over the years the focus of regional policy has evolved from a narrow emphasis on industrial recruiting and public works to encompass the total business environment. Public works and industrial incentives are only a part of the business climate of a region. The investment and entrepreneurial climate of a region has other dimensions: technological, cultural, regulatory, amenity resources, government tax and regulatory policies, and incentives for risk-taking. State and local government tax, expenditure and regulatory policies have a significant impact on all of the major dimensions of the climate for entrepreneurship and innovation. A comprehensive economic development strategy to improve the overall business climate of a region requires careful coordination among training, community development, education, research, tax and regulatory policies. State and local government are ideally situated to provide this coordination. Since an improved business climate benefits all industries—high-tech, low-tech, manufacturing and service firms—a strategy of targeting the process is industry neutral.

"One of the major barriers to entrepreneurial development in most regions is the lack of an adequate supply of risk capital."

A New Regional Entrepreneurial Policy

The following are suggestions for a new approach to regional development policy. The approach advocated in this report rejects industrial targeting in favor of a comprehensive government strategy to improve a region's overall climate for entrepreneurship and innovation. The role of state and local governments would be to target the process of economic development rather than selecting industries or firms for selective subsidies. To be more specific, the role of government would be to identify and remove barriers to entrepreneurial development within the state and its regions. This strategy is predicated on the belief that state and local governments have a large impact on the process of regional development. In our modern economy, state and local tax, expenditure and regulatory policies are significant inputs into the business development process. How well these inputs are managed and tailored to the long-run needs of a region's economy is an important component of that region's overall climate for investment, entrepreneurship and innovation.

Entrepreneurial activities flourish during periods of economic change. Resources released in declining industries create new entrepreneurial opportunities. By removing entrepreneurial barriers, the transition of a declining economy to a new economic purpose will be facilitated, and in the process the social costs of economic change will be minimized.

One of the major barriers to entrepreneurial development in most regions is the lack of an adequate supply of risk capital. U.S. capital markets are highly organized and efficient, but they are also highly concentrated in major metropolitan centers. Less developed, lagging regions and smaller communities frequently lack mature capital markets for business development finance. Government can provide a significant stimulus to regional economic growth by assisting in the emergence of private sector capital markets. Creating a secondary market for small business loans, promoting competition within the banking industry, reducing barriers to entry in occupations, removing regulatory barriers to business formation, and the efficient management of the regulatory process are some of the many actions state and local governments can take to improve entrepreneurial activities.

State and local governments also can improve public services, promote and protect regional amenities, and provide quality living environments and communities. Inadequate educational opportunities, tax policy, unnecessary regulations, and occupational barriers are examples of constraints on regional entrepreneurial expansion. Institutional rigidities of this nature inhibit entrepreneurs from moving resources to their best and highest use, and, in so doing, limit the job-creating potential of the region's economy.

Ideally, regional entrepreneurial development policy would be a state and local government responsibility. It would not target regions and communities within the state for special development assistance. It would remove barriers to entrepreneurial development in all communities within the state. An even-handed approach would benefit leading and lagging regions and sectors of the economy equally. The market would be relied upon to allocate economic resources among investments and communities.

The strategy would result in some regions and communities gaining and others declining. The spatial rearrangement of business activities and job growth would be a natural outcome of dynamic regional economies. Of course, of interest to state and local policymakers is the impact of economic change on regions and communities experiencing long-term decline. While efficient regional development patterns would maximize job and wealth creation for the entire region and nation, community assistance may be necessary to ameliorate distress in the declining regions.

Distressed Community Strategy

Regional policy ought to continue to give special attention to the health and welfare of citizens in distressed communities. Economic distress is primarily a lack of sufficient entrepreneurial opportunities to sustain the health and needs of members of distressed communities. National transfer payments will provide a minimum floor on the level of economic welfare of poor families and families that are without wage earners. State and local governments also have an obligation to assist these families because of the lack of new opportunities in their communities. Providing services for the elderly, uneducated, handicapped and mentally incompetent individuals—the primary victims of economic change in distressed regions—ought to be a shared federal, state and local government responsibility.

Federal Role

What is the role of federal regional agencies, such as ARC and EDA, if regional entrepreneurial development policies are primarily a state and local government function? The prevailing opinion within the Reagan administration is that federally-funded, multi-state planning agencies have no legitimate function. I believe that this doctrinaire view is mistaken. Federal regional agencies can help state and local governments identify new opportunities. They also can assist in assuring that federal expenditures on physical infrastructure, education, training and transfer payments are consistent with the long-term needs of their regions. Federal regional agencies also can act as a catalyst to encourage state and local governments to adopt development policies that are in the national interest, and they can help to coordinate policies for distressed communities and individuals. Finally, federal agencies can provide important technical and planning services, including encouraging joint research-and-development projects of importance to the region.

In summary, the challenge of federal regional policy, if it is to survive in the decades ahead, is to find ways to channel state and local development programs into efforts that augment the long-run growth potential of the regions. While the actions of a single state or local government may seem to be unimportant from a national perspective, in the aggregate, they can make a significant contribution to U.S. competitiveness and productivity growth.

The Fiscal/Economic Development Linkage in Ohio

By Richard G. Sheridan

State fiscal and economic development policy in the past has been directed toward facilitating the capital goods production sector of Ohio's economy. In the 1960s the state built an extensive and expensive vocational education system. Its transportation network was expanded, and it was the first state to complete its portion of the interstate highway system.

As a matter of fiscal/economic development policy, Ohio favored the use of financial incentives to induce industrial relocation and continues to do so. This kind of policy has been directed primarily toward attracting large manufacturing firms that are looking for a work force with vocational skills, and an environment with a good transportation system in a central location and with relatively low energy costs.

Ohio fit the bill until the 1960s. The state's policies continued to pursue manufacturing firms, but, by all measures, these firms were no longer the critical contributors to the state's economy. The state, and especially its manufacturing centers, have steadily lost population since 1960. Employment in the manufacturing sector continues to decline. Personal income growth lags the rest of the nation. Ohio has reached a juncture as critical to its future as the one that signaled the transformation of agricultural Ohio to industrial Ohio.

The recognition that Ohio had to change the focus of its fiscal/economic development policy came as a result of the devastating effects that the 1980 recession had upon the state. It suffered a significant reduction in revenues when the unemployment rate jumped from 5.9 percent (in 1979) to 8.4 percent (in 1980), and then continued to rise to 9.6 percent in 1981, 12.5 percent in 1982 and remained near that level (12.2 percent) in 1983.[1] In that year, Ohio elected a new governor, Richard F. Celeste, who promised as part of his campaign that there would no longer be "business as usual" in Ohio state government — there would be a new development policy for the state. This article examines the nature of that policy and how it has been linked to the state's fiscal policy.

Three Critical Paths for Economic Development/Fiscal Policy

Facing declining population, high unemployment and low growth, the state could choose one of three courses of action. It could be assumed that state government can have no influence on the economy and a status quo fiscal policy could be pursued. Government would concentrate on trying to maintain existing services with a limited resource base. This would mean no new initiatives could be financed and perhaps even existing programs intended to induce industrial development — such as the several loan, loan guarantee and direct grant programs — would be abandoned.

Another state development path would be to limit state economic influence to "traditional" development programs. The state could continue to try to stimulate the economy through programs to induce tourists to come and spend their money in the state (thereby implicitly encouraging the further expansion of service industries), and also to continue its financial incentive programs intended to attract large industrial plants to relocate or expand in Ohio.

A third course of action would be to try to redirect state policy and spending in order to attack the probable causes of economic decline in a mature industrial state. A strategy for this path would be to expand educational opportunities and programs and create incentives for Ohioans to improve their levels of skill and increase their educational attainments, in recognition of the fact that repetitive routine work paying high wages is either being exported abroad or being performed by workers in states with lower wages. This choice would also recognize that most new jobs are being produced through the birth of new businesses or the expansion of existing ones, not through industrial relocations. It would recognize that high business taxes and stringent regulations do not provide incentives for expansion or for the birth of new businesses. Finally, it would recognize that business tends to flourish in states with dependable governmental services of high quality.

When Governor Celeste took office in 1983, executive and legislative revenue forecasters projected a half-billion-dollar state general fund deficit in the six months remaining in the 1981-83 biennium. To help solve that problem, Celeste not only proposed a tax hike, but also, departing from the practice of his predecessor who had governed during the three most devastating years of the recession and made ends meet through a succession of temporary tax hikes, sought legislative approval for a substantial

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permanent tax increase, largely through increases in, and modifications of, the state personal income tax. This tax increase, coupled with an improvement in the economy, enabled the governor to propose new and different ways of "doing state business." Armed with almost $2.5 billion in additional resources for use during the 1983-85 biennium, his first budget set the tone for the selection of a new economic development path for the state using the budget allocation process as its guide.

The 1983-85 Biennial Budget[2]

The governor's 1983-85 budget sought to utilize the additional $2.5 billion or more in revenue generated by the 1983 tax increase to break out of the pattern of providing just enough monies to keep up with ongoing spending programs — the basic incremental approach to budgeting which, for the most part, characterized the state budgets of the previous decade. Implicit in the governor's proposal was a break with this tradition as evidenced by (1) the initiation of several new programs and the expansion of existing programs with potential long-term economic benefits to the state; (2) an alteration in the tax burden; and (3) a subtle shift in the patterns of taxing and spending intended to place greater financial emphasis upon education and less on human service programs.

1. New Initiatives

Within the budget, most of the new and expanded programs were in the Department of Development. Among those initiatives are the following:

- A new $32.4 million Thomas Alva Edison Partnership Program was created to assist businesses and universities to identify new technologies, products or processes with commercial application.
- The state's bond program to support loans and loan guarantees was almost doubled, and the state's "Industrial Inducement Fund," from which various grants to businesses are made, was doubled from $150 to $300 million.
- Ohio's travel and tourism budget was increased from $1.1 million to $5 million per year.
- The Department of Energy was abolished and its responsibilities were transferred to the Department of Development, thereby expanding its scope. Also abolished and consolidated into the Department of Development was the Ohio Development Financing Commission, which had independently managed the state's loan and loan guarantee programs.
- The state's Ohio Technology Transfer Organization, which is charged with the brokerage of higher education information and expertise to businesses, was transferred to the Department of Development and expanded.
- Individual divisions within the department received expanded budgets, including the offices and divisions responsible for international trade, minority and small businesses and industrial training.

In the appropriations for the Ohio Board of Regents, which oversees the state's college and university system, two new programs, though modestly funded, are worth noting. There was a $4.5-million appropriation for a new "eminent scholars" program to attract and sustain in Ohio's public universities scholar-leaders of national or international visibility. In the new "Program Excellence" program, $3 million was to be used to recognize and reward high-quality academic programs at institutions of higher education. In primary and secondary education, new programs for educational excellence and competency were established to promote excellence in mathematics, science and English and for the development of a pupil competency assessment instrument.

Outside of the state budget there were other actions of note. The Legislature passed a bill permitting state retirement systems to invest in debt or equity interests in venture capital firms with their principal office in Ohio in an effort to provide a stimulus to new entrepreneurs. Another bill, the so-called "linked deposits" bill, makes up to $100 million available for low-interest loans to small businesses and farms to assist in encouraging entrepreneurship. New research programs to take advantage of Ohio's abundant coal supplies were also authorized through legislative enactments.

These kinds of initiatives represented a marked departure from the priorities set in past budgets and in past development policy. Use of some of the new tax monies for welfare grant increases and employee pay raises was quite limited. The monies raised by the new tax were deployed in order to emphasize programs which, it was hoped, would improve the economic climate of the state.

> *"These various tax-policy changes were conscious choices intended to affect state economic development."*

2. Tax Policy

Probably the single most important economic development policy choice made in Celeste's first budget was the decision to use the leverage gained through the increased personal income tax monies to alter the balance between the tax burden on businesses and the tax burden placed on individuals. Part of the proceeds of the individual tax increase was spent to reimburse local governments for monies lost by reducing the taxes paid by businesses on their personal property, the proceeds of which had been going to local units of government. The Legislature accepted the governor's recommendation to abolish the state tax on intangible personal property (productive and unproductive investments such as shares of stock, notes, bonds, mortgages, land contracts, money and credits), effective in 1986. Most of those monies had gone to support local public libraries. For 1986, the decision to eliminate that tax will cost the state an

estimated $200 million or more (the actual decision dedicated 6.3 percent of personal income tax receipts to local governments as replacement money).

The Legislature also decided to provide a $10,000 exemption on the tangible personal property tax that is applied to machinery, equipment and inventories used for business in Ohio. This exemption cost the state $59 million in local government replacement monies for Fiscal Year 1984. Additional changes were made in various state taxes, which had an overall net effect of increasing state corporate franchise taxes by an estimated $199 million in FY 1984 and $277 million in FY 1985.

The corporate franchise tax increases, plus increases in the public utility tax, roughly offset the costs of providing certain tax deductions and credits to the personal income tax. They closely approximate the state cost of making up for local revenue lost from eliminating the intangibles tax beginning in 1981 and for providing an exemption for the tangible property tax. In short, when the dust is settled and the full effects of all of the various tax law changes are in place, businesses will remain in about the same place as they were before the major tax increases were enacted (except for public utilities). The individual taxpayer is paying the costs of the additional spending made possible by the overall increase in revenues resulting from the permanent boost in the individual income tax rate and various other tax law changes.

The decision to repeal the tax business felt most onerous, the intangibles tax that was levied regardless of the profit position of a company, evidenced an acceptance of the argument that taxes have an adverse effect upon the business climate and on business locational choices. The decision to provide a $10,000 tangible tax exemption was based on a desire to assist small businesses (an estimated 100,000 businesses are estimated to have benefited from this provision). Both decisions rest on an assumption that there is a connection between economic development and tax policy, including *levels* of taxation.

There was another critical tax policy decision made linking fiscal and economic development policy. Not only were the taxes paid by individuals raised to support state spending, but the tax itself also was made more progressive, thereby shifting the tax burden. And, not only did the new tax provide an overall 90-percent surcharge on taxes paid (or an additional 40 percent above the 50 percent temporary surcharge that was in existence when the permanent change was adopted), but it also added brackets to the tax table with higher percentages charged to higher-income taxpayers. Thus, the cost of that portion of state spending borne by the individuals through payments in the personal income tax was shifted to higher-income taxpayers who presumably could afford to pay more. In addition, new tax exemptions, the benefits of which would inure more to the lower-income taxpayers, were enacted.

These various tax-policy changes were conscious choices intended to affect state economic development. Considering the magnitude of the dollars involved, the choice is a major policy decision in favor of using the state's taxing powers to influence business development. If nothing else, it was to signal businesses that Ohio is concerned about its business climate to the extent that it is influenced by the state tax policy. The decision to "sock it to the rich" with the individual income-tax changes could, however, be counterproductive and may have been the compromise that had to be struck to reduce business taxes.

Not to be overlooked is the fact that all of the tax law changes were made *permanent* — a point not missed by the opponents to the taxes who brought the issue to the voters for ultimate resolution. They argued, through a constitutional initiative, that the state's economic malaise would be of short duration and that only temporary tax increases needed to have been adopted until the economy rebounded on its own volition. And, it was argued, permanent tax changes would have a negative economic development impact raising "more than would be needed" for the provision of reasonable government services when unemployment declined and the economy once again prospered. But the voters accepted the permanent tax increases, thus vindicating the argument that economic development can be enhanced by providing the kind of state financial stability that had been absent during the preceding three years of budget retrenchment.

The third evidence of a shift in state economic development policy as formulated through the budget is the subtle change that was begun to alter the nature of spending on specific large, functional groupings of state programs.

Table 1
Fiscal Year 1985 Distribution of Additional Revenue Raised by 1983 Tax Increases (in millions of dollars)

Budget Distribution	Dollar Amounts
Continue FY 1983 Service Levels (increase caseloads and inflation)	$ 465
Education	
Elementary and Secondary	402
Higher	166
Human Services	129
Economic Development, Transportation and Natural Resources	50
Capital and Operating Contingencies	37
5-Percent Employee Pay Raise	39
Other	61
Reserve Fund Balance	46
Total	$1,395

Source: Office of Budget and Management, materials prepared for press conference, Columbus: 1983

3. Comparative Functional Spending

An analysis was made by the state's Office of Budget and Management on how the new tax monies raised in 1983 were to be expended in FY 1985. That analysis is shown in Table 1.

Significant here is the conclusion that about one-third of the total tax increase was used up in paying for increased human services caseloads resulting from the poor economy and high unemployment, and for overall price increases. Most important is that 41 percent of the total went to education programs. Presumably, had there not been a tax increase, education would not only have not received the additional $568 million, but might even have had to receive fewer funds to assist in finding the $465 million needed to meet the costs of increased caseloads and inflation — virtually uncontrollable spending items.

Further changes in the functional areas of spending that could be easily observed had to await the adoption of the state's 1985-87 biennial budget.

The 1985-87 Biennial Budget

In FY 1982, spending on education consumed 40.7 percent of the state's budget. As planned by the appropriations act, spending on these programs in FY 1987 will require 42.2 percent of the state's budget. This represents a substantial change in the direction of state program spending, especially when one considers the fact that enrollments in primary and secondary and higher education schools have been leveling off and even declining. Therefore much of the increased state spending on education represents real growth rather than growth simply to meet increased costs and increased enrollments. While state spending on education consumes more of a larger state fiscal pie, spending for the state's human services programs has declined from 43.8 percent of the state's budget in FY 1982 to an expected 38.4 percent in FY 1987. Aid to local government and tax relief increased during this same period largely as a reflection of the state costs of eliminating the intangibles tax.

Table 2
Economic Development Appropriations

Department / Line Item Title	Line Item #	FY 1980	FY 1987	Percent Change 80-87
Development				
Thomas A. Edison	401	$ 0	$ 17,321,328	
Ohio Technology Transfer	402	0	1,751,058	
Small Business Development	404	0	1,071,541	
Minority Business Development	405	646,256	1,261,687	95.23%
Travel & Tourism	407	775,759	5,589,513	620.52%
Coal Research Development	408	0	4,007,243	
Enterprise Development	409	11,235	21,632	92.54%
Industrial Plant Inducement	412	6,654,419	14,397,688	116.36%
Industrial Technology & Enterprise	427	0	325,874	
Community Development Corporate Grant	431	0	500,000	
International Trade Operating	432	0	969,624	
Business Development Marketing	433	0	0	
Industrial Training	434	0	11,000,000	
Japanese Center	435	0	300,000	
Labor Management	436	0	1,000,000	
Business Incubators	437	0	0	
Regional Planning/Development	503	99,644	103,672	4.04%
Direct Loan Program	510	5,000,000	3,197,125	- 36.06%
Minority Development Financing	511	350,000	3,066,050	776.01%
Housing & Urban Development	603	951,607	2,040,000	114.37%
Manpower Development	608	658,990	0	- 100.00%
International Trade	621	0	1,640,885	
Housing Development	622	305,208	1,604,230	425.62%
Coal Research & Development	626	0	4,007,243	
Total Development		$ 15,453,118	$ 75,176,393	386.48%

The pattern of state spending initiated following the increase in state taxes has clearly shifted away from welfare and other human services programs and toward increased spending on education programs, on a number of new and expanded programs in the Department of Development, and on paying for changes in tax policy intended to improve the image of Ohio in the eyes of the business community. The initiatives of the 1983-85 budget were expanded in spite of the fact that soon after the adoption of the tax increases, economic improvements led to reductions in the personal income-tax reduction scheduled for CY 1986 and further reductions in 1987. According to the State Department of Taxation, this resulted in a revenue loss of more than $200 million in FY 1986 and $300 million in FY 1987. Considering the size of the 1983 tax increase, however, along with improvements in the state's economy, there were still sufficient monies to continue and expand the spending patterns facilitated by that tax increase.

During the 1985-87 biennium there were significant increases in spending for programs associated with economic development. Table 2 compares spending for a number of such programs in three departments between FY 1980 and FY 1987. The specific programs identified in the Department of Development increased four-fold in the seven-year period, and the several higher-education initiatives, based on an assumed linkage between educational excellence and economic development, increased two-and-a-half times. The vocational education programs cited grew by 48 percent during this period. Thus, while vocational education is still viewed as an important factor in state economic development, it has received less of an increase than the higher education programs, those of the Department of Development, or overall state spending, indicating a shift in state emphasis. Overall, the state commitment of $444 million for these selected programs represents an 85-percent increase in spending between FY 1980 and FY 1987. Overall General Revenue Fund

Table 2 (cont.)
Economic Development Appropriations

Department / Line Item Title	Line Item #	FY 1980	FY 1987	Percent Change 80-87
Education				
Vocational Education Match	416	$ 1,213,650	$ 1,747,098	43.95%
Vocational Education	507	159,052,537	241,020,000	51.53%
Post-Secondary Vocational Education	514	3,500,000	10,324,919	195.00%
Career Development	522	3,806,036	6,076,485	59.65%
Adult Vocational Education	523	3,400,000	5,504,624	61.90%
Education Excellence & Competency	524	0	2,106,379	
Vocational Education Equipment	526	2,000,000	5,198,150	159.91%
Vocational Education	616	34,184,014	34,451,458	0.78%
Ohio Career Information System	656	0	400,000	
Total Education		$207,156,237	$306,829,113	48.11%
Board of Regents				
Jobs Development Center	403	0	0	
Program Excellence	452	0	1,530,000	
Academic Excellence	453	0	11,254,310	
Research Challenge	454	0	16,000,000	
Productivity Import Challenge	455	0	2,200,000	
Cooperative Extension Service	511	6,126,300	11,001,782	79.58%
Labor Education Service	523	831,750	1,236,600	48.67%
Agricultural Research & Development Center	535	10,612,000	18,822,601	77.37%
Ohio University Coal Research	575	0	200,000	
Center for Water Sources	595	0	200,000	
Total Board of Regents		$ 17,570,050	$ 62,445,293	255.41%
GRAND TOTAL		$240,179,405	$444,450,799	85.05%

Source: House Bill 238 of the 116th General Assembly and *Ohio Executive Budget* for the biennium July 1, 1981, to June 30, 1983.

spending increased 100 percent during this period.

Not only does it appear that there has been a shift in the nature of economic development and a substantial increase in certain kinds of programs, but the governor has indicated this to be intentional as well.

Views of the Executive

During testimony in support of the governor's proposed 1985-87 budget, the director of the Office of Budget and Management reiterated the importance of the state's spending and tax policy redirection on economic development. After citing the new development initiatives already described — improvements in funding for education and reductions in business taxes — he stated:

> Thanks to these and other actions, Ohio's business climate has improved. Business has responded to Ohio's improved climate by voting with its feet.
>
> Long-time Ohio companies such as Cincinnati Milacron and Huffy chose to expand in Ohio instead of moving elsewhere. Other companies such as Phillips/ECG, Litel and Lima Energy have closed operations in places like Alabama, Wisconsin and New York and moved them to Ohio.
>
> But perhaps the most gratifying development has been the decision of an increasing number of foreign investors to invest in Ohio. They are tough-minded, practical businessmen who can choose to locate anywhere in the world. And companies such as Honda, Roxane Labs and GMBH have chosen Ohio, not Texas or Kentucky. And each of these corporations I have just mentioned here has one thing in common — the deal that brought them here or kept them here included a financial incentive package paid directly or indirectly out of the state's General Revenue Fund.[3]

The governor took credit for the improvements in the economy during his re-election campaign, just as he did during his 1985 review of accomplishments resulting from his first budget, stating that "Ohio's improved economic condition also is based upon a number of state initiatives," and "Our people are returning to work, in part, because Ohio has developed and implemented a comprehensive jobs strategy."[4]

The difficulty is that it can be argued that state efforts had little to do with improvements in the economy — that no state has the ability to make a significant impact on its economy through tax and spending policies and that only national policies can have such an impact. While the effect of a state's financial policy upon private sector development continues to be debated, Ohio will be reviewing its revenue structure and establishing spending priorities as part of the 1987-89 biennial budget adoption process. If the state's decision-makers wish to continue to cloak tax and spending decisions in economic development robes there are some facts about Ohio's fiscal policies which can help guide them in selecting the direction such decisions might take.

State Tax Policy

In the past 10 years, the state General Revenue Fund tax structure has become increasingly dependent upon the income tax, which accounted for 37.8 percent of 1984 tax revenues compared with 24.7 percent in 1975. The percent of 1984 total tax revenues derived from sales taxes is 53.3 percent for 1984 compared with 59.5 percent in 1975. The sharp increases in the income tax occurred, as shown in Chart 1, during the 1975-80 period, while the sales-tax growth was greater during the 1980-84 period when the growth of the category "other taxes" actually declined.

When receipts from taxes are compared with non-tax and intergovernmental sources of revenue, as illustrated in Chart 2, it can be seen that the state's dependency on taxes has remained relatively steady. Over the years there has been a declining dependency on intergovernmental receipts compared with non-tax receipts, however.

Compared with other states in 1983-84, Ohio ranked 14th in the total state and local taxes on individual and corporate income taken as a percent of personal income. The percent for Ohio was 3.1 with the neighboring states of Michigan taking 4.4 percent, Pennsylvania 3.2 and Kentucky 2.9. Ohio ranks 22nd with 6.0 percent of individual income taken on an added dollar of earnings above $40,000 in 1986.[5]

Overall, Ohio's tax structure is relatively non-progressive. Using the ratio of taxes as a percent of income, Table 3 shows the percent and ranking of Ohio compared with other states for several different categories of income in 1982.

However, as can be seen in Table 4, there has been a shift in tax policy between 1978 and 1982. A significantly larger proportion of the state's tax liability comes from those earning more than $35,000 per year. In 1978, that group accounted for 31.7 percent of the total, but in 1982 this same group accounted for 51 percent of the total tax liability. Those with incomes under $15,000 accounted for 12.3 percent of liability in 1978, but only for 6.6 percent of the total in 1982. This shift is probably both a reflection of changes in tax policy and changes in the income levels of some taxpayers.

Ohio ranked fourth in the nation in 1986 in the corporate profits tax when measured according to the percent taken on an added dollar of profit over $1,000,000. In Ohio that percent is 9.70 exceeded only by Minnesota at 12.0 percent, Connecticut at 11.5 percent and New York at 10.0 percent.[6]

The corporate tax is levied primarily against manufacturing firms, although the percent of total tax liability from those companies has been declining rather dramatically. As shown in Table 5, this could be a reflection of

changes in state tax policy occurring between 1979 and 1983 or of the shift in the importance of manufacturing to the state's economy. Measured in terms of employment, trades and service are far more important than manufacturing as a source of jobs. As of November 1985, manufacturing accounted for 25 percent of the state's nonagricultural employment, the service industries accounted for 46.2 percent, and wholesale and retail trade accounted for 24 percent.[7]

Within the manufacturing industry, the total tax liability also has changed between 1979 and 1983, as shown in Table 6. Transportation equipment companies, which accounted for 24 percent of the tax liability in 1979, accounted for only 4 percent in 1983 — a dramatic change. Increasing significantly in importance are the food, chemical and fabricated metal industries.

Analysts of a state's tax structure frequently seek to compare states with one another in terms of tax effort. These comparisons are useful; but perhaps a better measure, certainly to the taxpayer, is the burden that taxes place upon them. Tax burden is an elusive measure given the complexities of the tax structures in each of the states and the different factors that contribute to what any individual might pay (differences in income-tax deductions, size of family, consumer behavior and so on). To the extent that it is useful, a burden measure was constructed using the total state and local taxes in the largest city in the state, taking taxes as a percent of income for 1982. The results of this analysis for three different income groups and Ohio's rank are shown in Table 7.

Table 3
Progressivity of Major State/Local Taxes, 1982

Measure	Percent	State Rank
Income = $25,000/Income = $17,500	1.0	31
Income = $50,000/Income = $17,500	1.0	31
Income = $50,000/Income = $25,000	1.0	30

Source: State Policy Research, Inc., *State Policy Data Book, 1986*, Tables D-16, D-17 and D-18. Alexandria, Virginia: State Policy Research, Inc.

Table 4
Personal Income Tax Liability (After All Credits) By Income Class 1978-82

Income Class	1978 Tax Liability	% of Total Liability	1982 Tax Liability	% of Total Liability
$ 0 - 5,000	7,421,718	0.93%	8,217,694	0.52%
5,000 - 10,000	27,567,908	3.46%	28,258,080	1.80%
10,000 - 15,000	62,962,239	7.90%	66,951,698	4.27%
15,000 - 20,000	108,411,168	13.60%	111,434,560	7.10%
20,000 - 25,000	133,463,839	16.74%	160,575,224	10.24%
25,000 - 30,000	120,262,616	15.09%	197,761,905	12.61%
30,000 - 35,000	84,416,219	10.59%	194,705,578	12.41%
35,000 - 40,000	52,911,966	6.64%	166,201,853	10.59%
40,000 - 50,000	55,705,361	6.99%	214,198,900	13.65%
50,000 & Above	143,932,023	18.06%	420,442,219	26.80%
TOTAL	797,055,057		1,568,747,711	

Source: Ohio Department of Taxation, *1980 Annual Report*, Table 25; *1984 Annual Report*, Table 34. Columbus, Ohio: Ohio Department of Taxation.

Table 5
Reported Tax Liability (After Credits) By Industry 1979-83

Industry	1979 Total Tax Liability	Percent of Total	1983 Total Tax Liability	Percent of Total
Agriculture & Forestry	$ 806,167	0.15%	$ 541,901	0.11%
Mining	11,149,126	2.04%	16,070,865	3.30%
Construction	14,855,903	2.71%	17,410,523	3.58%
Manufacturing	347,088,726	63.42%	224,856,550	46.23%
Transportation	13,985,815	2.56%	22,215,713	4.57%
Wholesale Trade	39,660,975	7.25%	49,390,349	10.15%
Retail Trade	52,216,273	9.54%	54,130,899	11.13%
Finance	20,451,896	3.74%	28,054,761	5.77%
Service	20,828,846	3.81%	38,435,819	7.90%
Not Reported	26,230,393	4.79%	35,324,545	7.26%
TOTAL	547,274,120		486,431,925	

Source: Ohio Department of Taxation, *1980 Annual Report*, Table 40; *1984 Annual Report*, Table 13. Columbus, Ohio: Ohio Department of Taxation.

State Spending Policy

Ohio is not a comparatively high spending state. Total state and local general expenditures accounted for 16 percent of personal income in 1983-84, ranking Ohio 31st in the nation.[8] However, compared with other states, Ohio spends considerably more on welfare. For 1983-84, Ohio expended 15.4 percent of state and local outlays for welfare. This total was exceeded only in the states of Maine, Massachusetts, Michigan, New York, Pennsylvania and Rhode Island. Ohio had 36.2 percent of state and local outlays go for education, with 26 states expending more of their total on this major government function. Health accounted for 8.9 percent, highways 8.6 percent and interest 4.9 percent of state and local outlays for Ohio.[9]

Chart 3 shows the division of spending according to major functions for 1975, 1980 and 1984, using categories of spending provided in reports to the Census Bureau. The importance of intergovernmental expenditures is clearly shown. It remains in its relative position in each of the three years examined. Education, after rising between 1975 and 1980, in 1984 returned to slightly below its earlier 1975 level. Welfare expenditures rose steadily as a share of total expenditures.

In terms of rates of growth there are discernible differences in the growth patterns between the 1975-80 period and the 1980-84 period as shown in Chart 4. Highway expenditures grew dramatically during the latter period, outstripping all other major spending functions. Welfare and education each grew about the same in the 1975-80 period, but welfare growth in the 1980-84 period was more than twice as great as education growth.

Implications for Future Development Policy-making

The effects of the 1980 recession on Ohio made state policymakers much more aware of the significance of state tax and spending decisions on economic development. During the 1960s and 1970s, state spending emphasis on highway construction and vocational education was doubtlessly of value to manufacturing industries in need of skilled laborers and easy access to markets. Spending programs to attract and retain manufacturing industries were also an important part of state development policy during this period.

Beginning in 1983, however, a distinct difference in emphasis can be discerned. While vocational education programs continued to be expanded, along with financial incentive programs for industrial relocation, more attention was drawn to the implications of overall state tax policy on economic development and on overall state patterns of spending. Monies were directed to new or expanded programs to attract tourism and foreign trade; additional tax revenues were directed toward education; and the mix of individual and business taxes was considered as part of the tax increase debate. Perhaps most important was the fact that there was a conscious, explicit linkage made between what the state does to its tax structure, how it spends its money and what this does for its economy. Agency budget requests are increasingly couched in terms of how many jobs will be produced by additional spending. Tax expenditures are receiving more attention, as are aspects of the tax structure which could impact upon further economic growth.

Some of the data presented here is, of necessity, not as current as one would like. It has been presented in order to suggest additional considerations for state policymakers as they make tax and spending decisions which impact upon the state's economy. There will be pressures to decrease taxes, especially corporate taxes, in order to encourage further plant relocations to Ohio. There will be pressures to hold down overall state spending. There will be pressures to expand spending in one direction or another. In assessing desirable directions for future state spending, it is useful to consider the following:

Table 7
Burden of Major State / Local Taxes on Family, 1982 In Largest City

Family Income	Tax Percent of Income	Ohio's Rank
$17,500	8.0	9
$25,000	8.0	11
$50,000	7.9	12

Source: Derived from State Policy Research, Inc., *State Policy Data Book, 1986*, Tables D-13, D-14 and D-15. Alexandria, Virginia: State Policy Research, Inc.

Table 6
Total Tax Liability (After Credits) By Manufacturing Industry Classification 1979-83

Industry	1979 Total Tax Liability	Percent of Total	1983 Total Tax Liability	Percent of Total
Food	19,184,494	5.53%	22,590,650	10.05%
Tobacco Manufacturing	1,722,774	0.50%	2,709,891	1.21%
Textile Mill Prod.	673,128	0.19%	758,740	0.34%
Apparel & Other Textile	1,988,526	0.57%	1,778,524	0.79%
Lumber & Wood Prod.	3,717,753	1.07%	1,672,419	0.74%
Furniture & Fixtures	1,485,868	0.43%	2,031,129	0.90%
Paper	5,589,002	1.61%	4,835,563	2.15%
Printing & Publishing	14,879,046	4.29%	13,270,377	5.90%
Chemicals	34,336,134	9.89%	33,782,591	15.02%
Petroleum & Coal	12,445,247	3.59%	10,742,591	4.78%
Rubber & Plastics	12,097,987	3.49%	10,114,253	4.50%
Leather Products	1,228,402	0.35%	2,142,072	0.95%
Stone Clay & Glass	12,406,481	3.57%	5,898,791	2.62%
Primary Metal	24,478,541	7.05%	13,195,040	5.87%
Fabricated Metal	31,941,417	9.20%	31,964,357	14.22%
Non-Elec. Machinery	35,274,767	10.16%	23,274,644	10.35%
Electrical Machinery	41,413,603	11.93%	26,355,743	11.72%
Transportation Equipment	83,508,017	24.06%	8,366,852	3.72%
Instruments & Related	2,998,284	0.86%	4,149,118	1.85%
Miscellaneous Manufacturing	5,719,255	1.65%	5,223,767	2.32%
TOTAL ALL INDUSTRIES	347,088,726		224,857,112	

Source: Ohio Department of Taxation, *1980 Annual Report*, Table 42; *1984 Annual Report*, Table 17. Columbus, Ohio: Ohio Department of Taxation.

1. Ohio is not a high-tax state. Overall local taxes are about average and state taxes are below average.
2. The state personal income tax takes slightly less than the national average of personal income. The phased reductions already in place will probably lower this even more.
3. Corporate income taxes represent a relatively low proportion of total state taxes and also a relatively low portion of personal income. The corporate profits tax rate is among the highest in the nation.
4. The tax burden in Ohio falls heaviest on lower-income persons with $17,500 income; and the overall progressivity of the individual income tax is relatively low compared with other states.
5. Ohio is among the lowest spending states in the nation, ranking with our neighbor to the south. Ohioans spend less of their personal income on government than all but 19 states.
6. In overall state spending policy, only six states spend a greater proportion of their monies on welfare, whereas 26 states spend more on education than does Ohio.
7. Ohio's reliance on income taxes to support general government has risen by 50 percent in the past 10 years. Non-tax revenues are the fastest growing revenue source. It appears these are rising to make up for reductions in intergovernmental aid.
8. The biggest increase in the personal income tax occurred between 1975 and 1980, not between 1980 and 1984.
9. The industrial tax burden is being borne more heavily by the trade sector than by manufacturing, although it still contributes 46 percent of total tax liability. That represents a 50-percent decline in its overall share.
10. The state's manufacturing tax base has changed more toward chemicals, foods and fabricated metals and away from transportation.
11. The state's personal income tax liability has shifted to higher-income taxpayers.
12. Welfare expenditures have been consuming more of the state's dollars in the past 10 years than other major functions, and highways have been consuming relatively less.
13. The state has increased spending more for economic development in the past seven years than for other major functions and more than overall spending growth.

It is possible that changes in state tax and spending policies can have an impact on future economic development. Additional spending for education, entrepreneurship programs or other initiatives begun in 1983 can be undertaken without fear of Ohio becoming a high-tax state. Changes can be made in the state's tax policy to recognize and encourage the shift in direction away from manufacturing and toward services and trade, and, within manufacturing, toward the food, chemical and fabricated metals industries. Shifts in relative tax burden between business and individuals can be considered, as well as changes in the individual income-tax burden borne by different income groups. By directing attention to these elements, the linkage between fiscal and economic development policies could be further extended.

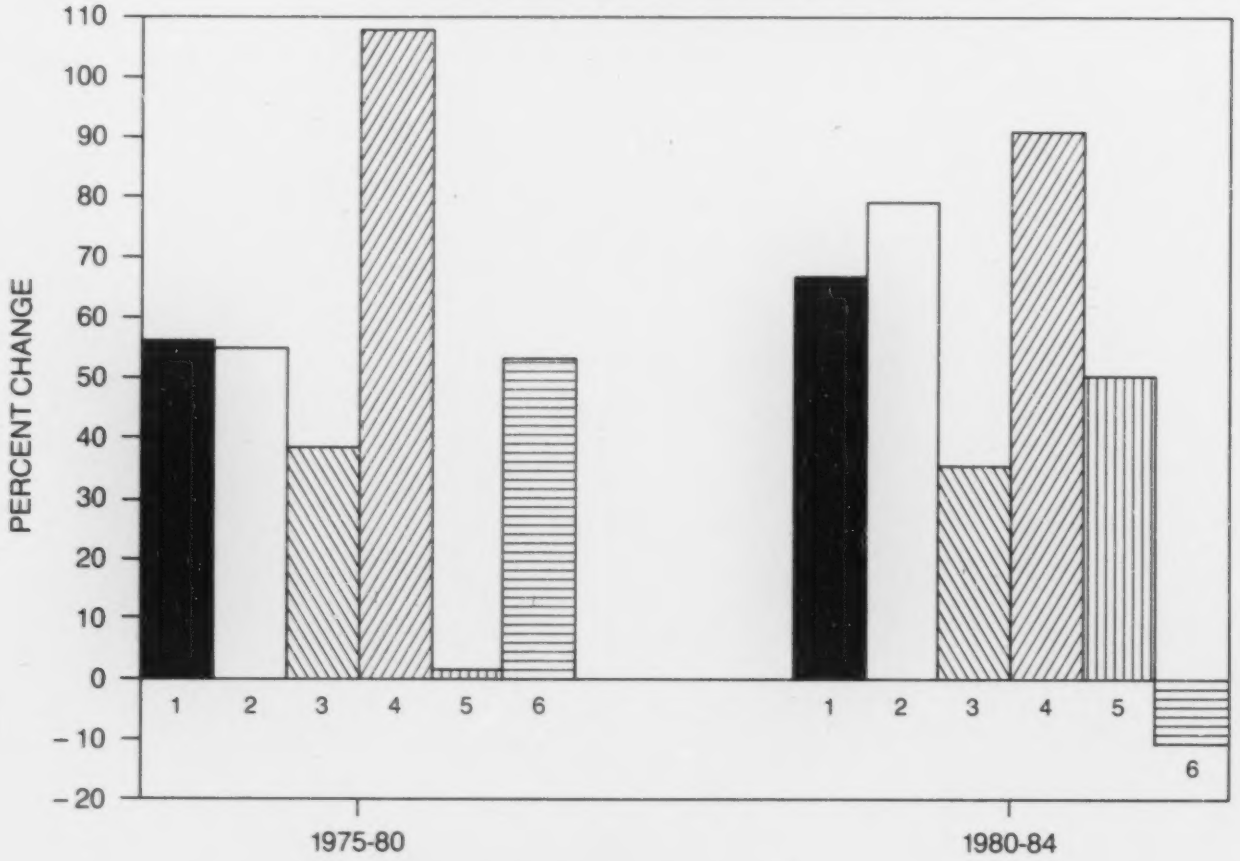
NOTES

1. U.S. Department of Labor, Bureau of Labor Statistics, *Employment and Earnings,* Volume 26, No. 1, January, 1979; Volume 28, No. 1, January, 1981; Volume 30, No. 1, January, 1983. Washington, D.C.: U.S. Government Printing Office.
2. Information compiled from House Bill 291 of the 115th General Assembly, untitled materials prepared by the Office of Budget and Management and the *Ohio Executive Budget* for the biennium July 1, 1983, to June 30, 1985.
3. Testimony of William J. Shkurti, director, Office of Budget and Management, regarding 1986-87 Biennial Budget, House Finance Committee, Columbus, Ohio, January 29, 1985.
4. Richard F. Celeste, *Fighting Back/Rebuilding Together,* a summary of the Celeste administration's Action Plan and Budget Submission for the Biennium, July 1, 1985, to June 30, 1987, Columbus, Ohio.
5. Data derived from U.S. Department of Commerce, Bureau of the Census, *Governmental Finances in 1983-1984* and *State Government Finances in 1984.* Washington, D.C.: U.S. Government Printing Office.
6. State Policy Research, Inc., *State Policy Data Book, 1986,* Table D-10. Alexandria, Virginia: State Policy Research, Inc.
7. U.S. Department of Labor, Bureau of Labor Statistics, *BLS Release,* February 19, 1985.
8. U.S. Department of Commerce, Bureau of the Census, *Governmental Finances in 1983-1984* and *State Government Finances in 1984.* Washington, D.C.: U.S. Government Printing Office.
9. *Ibid.*

Chart 1

Comparative Growth Rate of Taxes

1975-80 and 1980-84, State of Ohio



1 — Total
2 — General Sales
3 — Selective Sales
4 — Income
5 — License
6 — Other

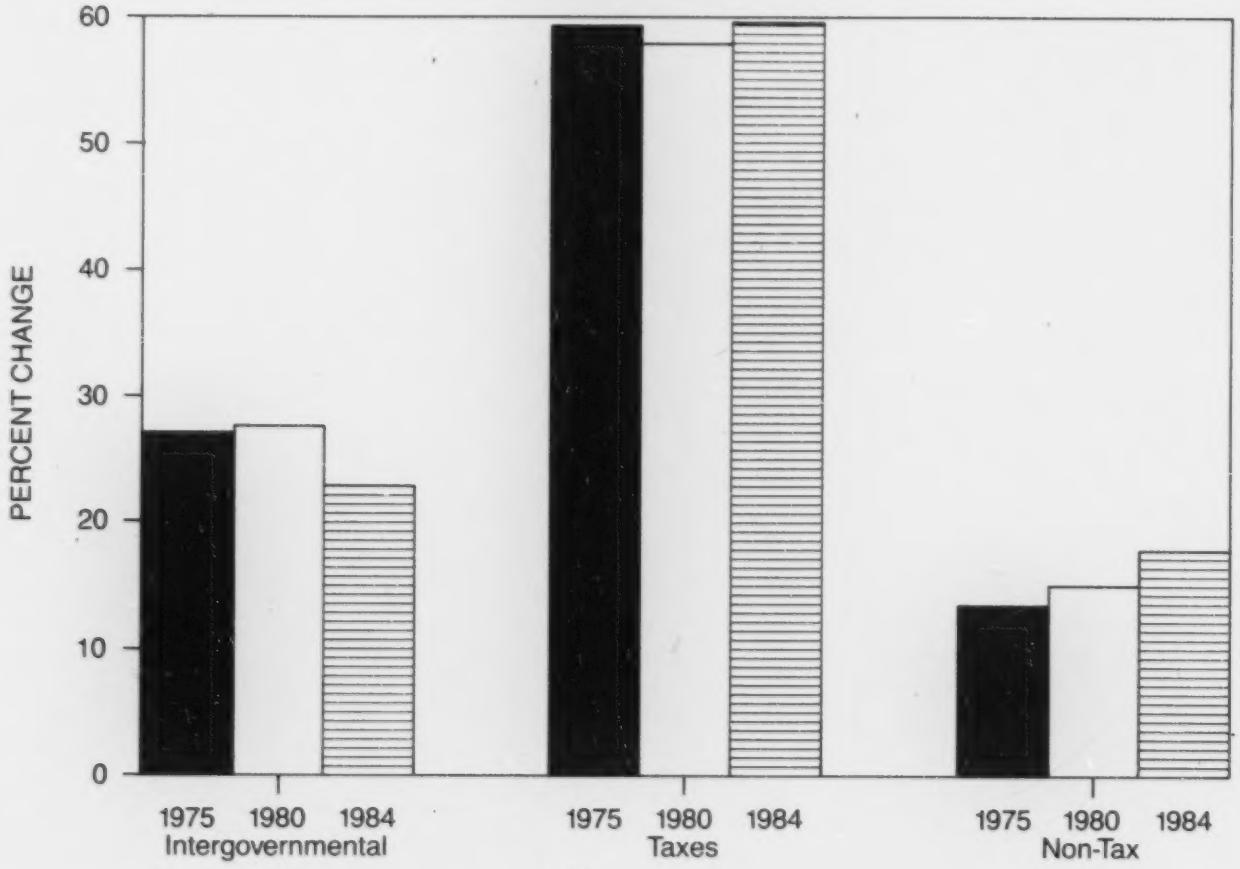
Source: U.S. Department of Commerce, Bureau of the Census, *State Government Finances in 1984*, Table 4; *State Government Finances in 1983, 1982, 1981, 1980* and *1975*, Table 7. Washington, D.C.: U.S. Government Printing Office.

Chart 2

Percent of Total State Revenues

3 Major Categories, 1975, 1980, 1984

State of Ohio

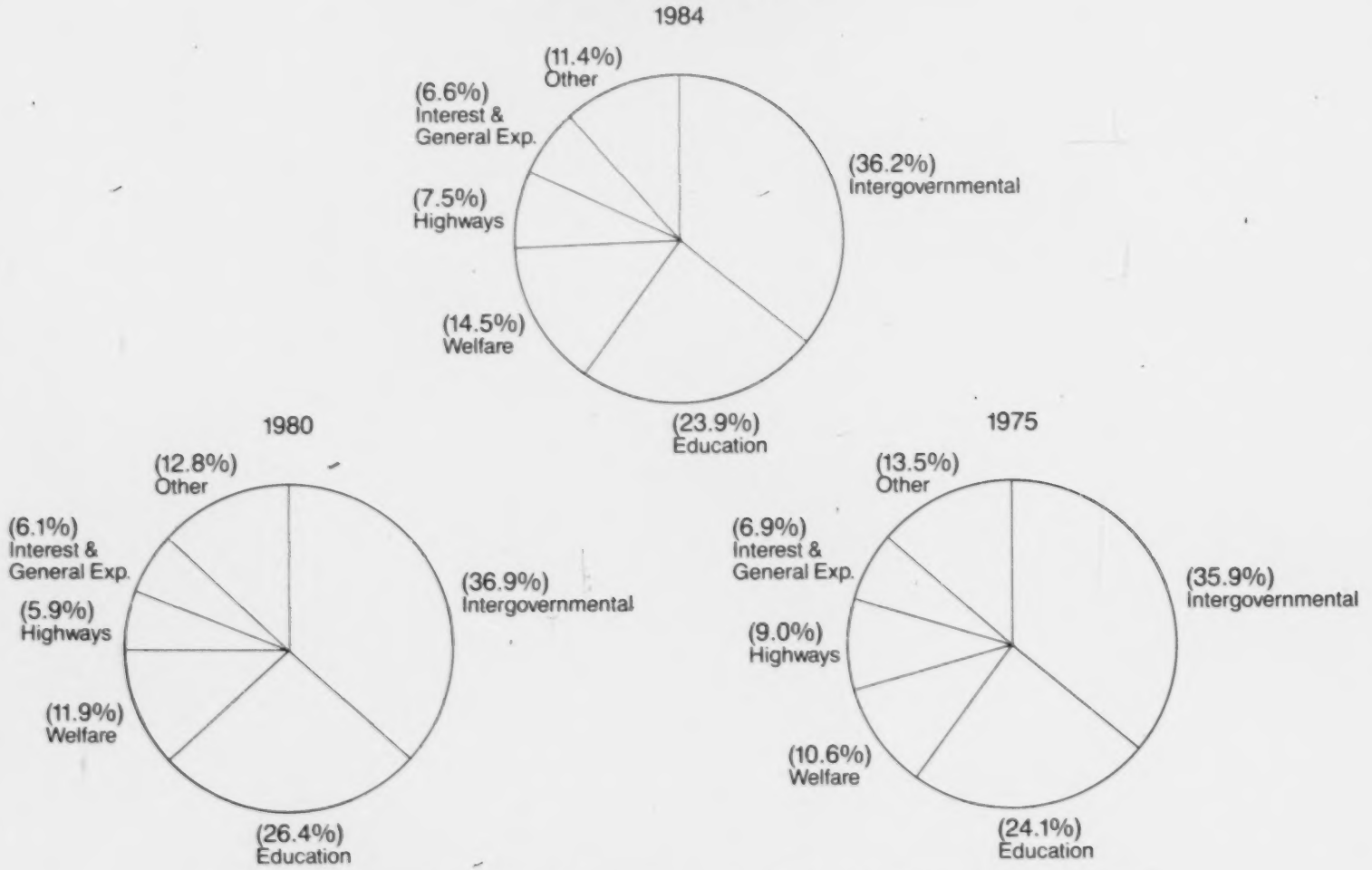


Source: U.S. Department of Commerce, Bureau of the Census, *State Government Finances in 1984*, Table 4; *State Government Finances in 1983, 1982, 1981, 1980 and 1975*, Table 7. Washington, D.C.: U.S. Government Printing Office.

Chart 3

Percent of General Expenditures

By Function, State of Ohio



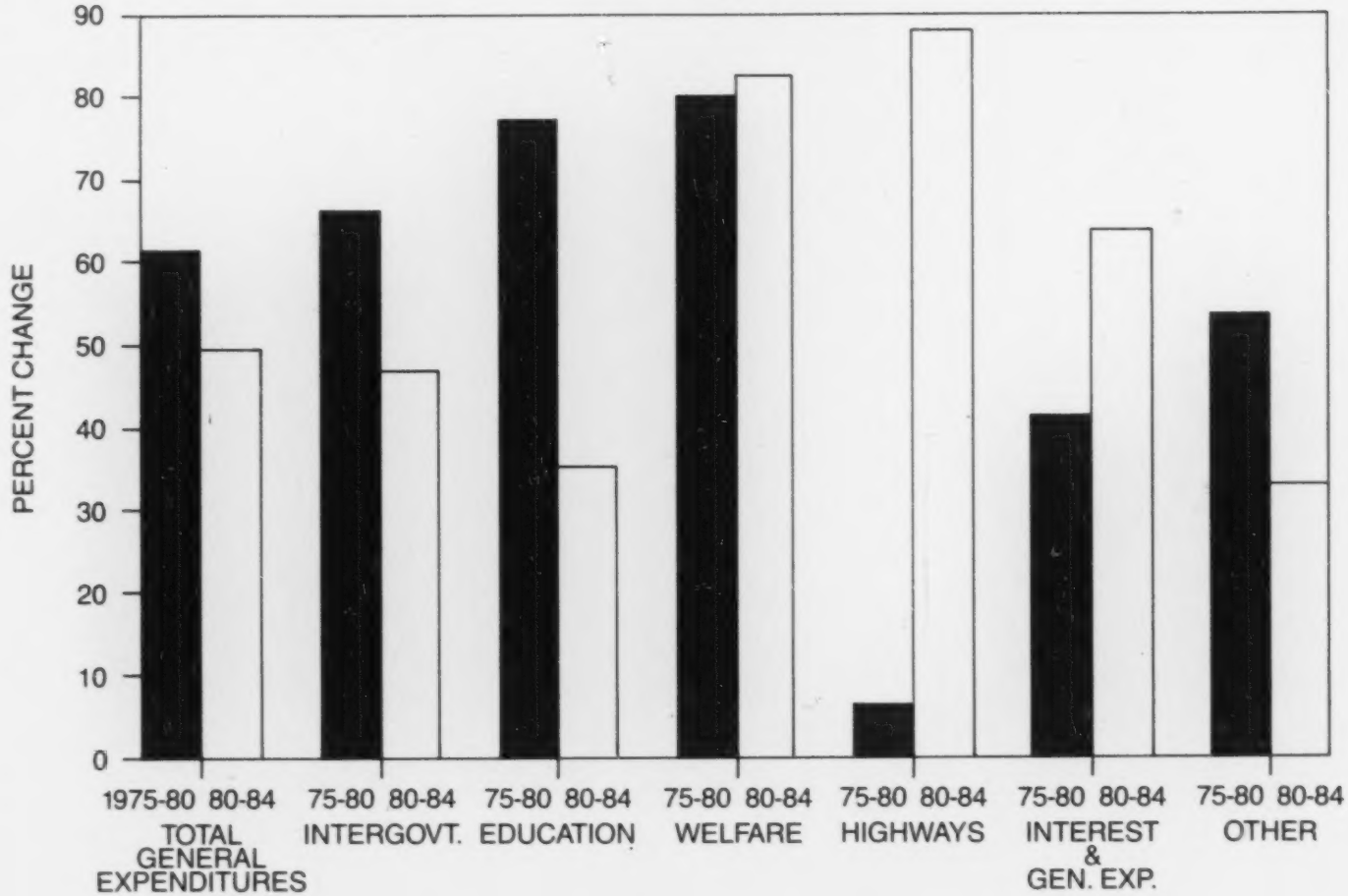
Source: U.S. Department of Commerce, Bureau of the Census, *State Government Finances in 1984*, Tables 10 and 11; *State Government Finances in 1983, 1982, 1981, 1980 and 1975*, Tables 8 and 9. Washington, D.C.: U.S. Government Printing Office.

Chart 4

Expenditure Growth

By Function, 1975-80 and 1980-84

State of Ohio



Source: U.S. Department of Commerce, Bureau of the Census, *State Government Finances in 1984*, Tables 10 and 11; *State Government Finances in 1983, 1982, 1981, 1980 and 1975*, Tables 8 and 9. Washington, D.C.: U.S. Government Printing Office.

Do States Have a Role in Economic Development?

By Roger J. Vaughan

For 50 years, states have attempted to administer economic policies — programs intended to expand opportunities for their residents usually at the expense of neighbors across their borders. They have marketed their attractions in magazines with pictures of "golden eggs" or "fresh carrots" and on television with 30-second jingles. They have opened offices abroad. And they have created development agencies to pursue branching or relocating businesses with abatements, exemptions, low-interest loans and other blandishments. What was once branded smokestack chasing is now repackaged as high-technology policy.

Economists have long questioned the efficacy of inducement-led development. But today, even practitioners are beginning to question whether inducement is the main road to growth — even if every other state does it. There are fewer relocating plants to induce. The service sector — usually overlooked by developers — is responsible for a growing share of new economic opportunities. And those distressed communities, such as Youngstown, Ohio, that have relied on traditional policies to rebuild their shattered economies have enjoyed little success (see Vaughan and Buss, 1986).

What is the basis for building a new model of economic development? What will it imply for state policy? These are the questions explored in this paper. The first section describes the flawed assumptions about how economic development occurs — assumptions from which traditional policies have been derived. The second section describes a new model of development that places a stronger emphasis on the entrepreneur than does the traditional model. The final section explores the implications of this new model for state development policy.

Traditional State Development Policy

The man who offers a bribe gives away a little of his importance; the bribe once accepted, he becomes the inferior, like a man who has paid for a woman.

—Graham Greene, 1966

What we do about economic issues depends on how we believe the economy works — on models that we usually leave implicit. Traditional approaches to development have rested on assumptions that, if they ever were applicable, have been rendered obsolete by technological change and the internationalization of the economy (see Babbitt, 1984, and Clarke, 1986).

State economic development policy was invented in the 1930s when Mississippi launched its Balance Agriculture With Industry (BAWI) program and introduced tax abatements, industrial revenue bonds, and the pursuit of footloose industries with financial inducements. Although Mississippi has remained the poorest state in the nation (while closing the gap a little over 50 years ago), most states have followed suit. As the number of relocating firms shrinks and the speed of economic change accelerates, states are winning fewer victories. The pursuit of General Motors' Saturn plant became so heated that some states offered inducements worth hundreds of millions of dollars over many years. They may be considered fortunate not to have won. It was not won by the highest bidder, but by Tennessee which offered, among other promises, to improve its educational system.

A closer look at how the Mahoning Valley tried to recover from the trauma of numerous plant closings illustrates the central weaknesses of a development policy based on large-scale public subsidies.

Public Development Policy In the Mahoning Valley

When the now-bankrupt Lykes Corporation, owners since 1969 of the Youngstown Sheet and Tube Company, closed the huge Campbell works in Youngstown, Ohio, in September 1977, the initial response was to attempt to reopen the steel plants (see Vaughan and Buss). Community and labor groups put together ambitious plans calling for community ownership, half a billion dollars in public subsidies, and guaranteed public purchase of the output. Neither this nor a more modest proposal to establish a steel technology center could attract the requisite private financing.

The next phase was an attempt to bring in large durable manufacturers to replace steel. Abundant public subsidies attracted many takers, but none that could get started. The first was ICX Aviation, proposing to construct a $150-million plant employing 4,000 people to build the YAK-40 commuter jet under license from the Soviet Union. After considerable local expenditure, the firm secured neither production rights nor private capital. Next, the U.S. Economic Development Administration (EDA) tried to direct the Commuter Aircraft Corporation (CAC) to locate in the area. A consortium of local banks advanced loans

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guaranteed by federal, state and local agencies. A $3.5-million Urban Development Action Grant (UDAG) and $1 million in training grants were added. Private lenders finally foreclosed in 1983 when CAC, which had promised to employ 2,000 people, failed to find either buyers or backers. The plant was eventually sold to a General Motors subsidiary at a bargain price. Negotiations were begun with at least five other aviation companies with no results.

Another rich package was offered to American Skyship, a U.S. subsidiary of a British firm proposing to build airships for use by the Coast Guard and for private transportation. The firm was given free land at a municipal airport, a UDAG grant and $10 million in industrial revenue bonds. No airship was ever built.

"What we do about economic issues depends on how we believe the economy works — on models that we usually leave implicit."

Diversifying from aviation, the City of Youngstown announced that Kosmos Exports of West Germany would build a $30-million brewery employing 200 people. The company was offered the largest UDAG ever, a state loan, revenue bonds and free land. This project, too, spent public money but never broke ground.

Other development efforts included: two industrial parks (one is vacant, the other one-third full), bricking over the city's main square, which diverted traffic from the downtown (and is now being torn up), the construction of a regional post office, the demolition of several historic buildings, and the creation of parking lots. The city is now actively pursuing a federal court house that would consolidate federal employees from other buildings downtown.

Lesson 1:
There is more to economic development than jobs.

Most development strategies are spurred by growing local unemployment. In seeking jobs, officials often forget that jobs are a means, not an end — they select businesses to subsidize, or public projects to fund, based on the number of jobs they add to the local economy. This preoccupation with creating jobs is understandable. With the unemployment rate in the Mahoning Valley remaining above 15 percent for much of the period, officials thought in terms of large projects that would need large public subsidies. They ignored measures, such as improvement of the local educational system and repair of the basic infrastructure, which would have shaped development more powerfully but less directly and more slowly.

The focus on jobs obscured the fact that development often means the introduction of labor-saving technology. Youngstown failed to capitalize on the growth of steel mini-mills because each mini-mill did not appear to offer enough new jobs. Ironically, a new mini-mill has been built in Warren — a town 20 miles to the north — that will use, as feedstock, the dismembered parts of the obsolete furnaces and mills from Youngstown.

The lesson to remember is that, however frequently jobs appear in political announcements, a job is only valuable to a community if the person holding the job is producing something that consumers value.

Lesson 2:
The availability of federal funds should not dictate strategy.

In a community with a shrinking tax base, bringing in federal funds may seem like a plausible way to revive the economy. Although the federal government was only a minority shareholder in the projects, the possibility of federal assistance was a major determinant of which projects were pursued and how projects were designed. Federal money was particularly useful since it was free of the constitutional restrictions that usually prevent state and local governments from making direct grants or loans to private enterprises.

But, as jobs, federal funds are only useful if they are used to finance a project that increases the local capacity to produce — post offices, bricked-over plazas and unsellable commuter jets do not fall into this category.

Lesson 3:
Targeting development strategies does not work.

Most development strategies are predicated on the belief that, to prove effective, resources have to be concentrated on certain types of firms. Given the limited resources that are available for economic development (rarely more than 1 or 2 percent of a state's budget), targeting seems necessary, even reasonable. Usually targets are selected because they are "export" industries and will stimulate local growth by serving markets beyond the state's borders. Industrial revenue bonds are reserved for manufacturing plants, research centers are funded for biotechnology research, and state recruiters aim at a short list of high-technology manufacturers.

To engage in targeting, a state must be able to identify those industries that have the greatest local-growth potential and that will be most responsive to state inducements. It should not be surprising to those that manage portfolios on Wall Street that picking winners is easier in theory than in practice. There are no data sets sufficiently detailed for us to be able to measure how firms will react to public subsidies.

Targeting may be inadvertent and on the wrong type of firms. As Mississippi has found to its cost, those businesses that are lured by financial incentives tend to be those undertaking simple assembly operations requiring only unskilled labor, and are liable to relocate if a better offer is made by another state or even another

country. And each subsidy provided to a chosen firm raises the taxes on the rest of the economy.

Even the export-base theory does not hold up to close scrutiny. There is no simple way of identifying export activity within sectors. A successful retail store such as L.L.Bean in the State of Maine is as capable of generating manufacturing jobs among its suppliers as is an expanding manufacturing plant of generating local retail activity. Federal Express, a service company, has created hundreds of jobs in Memphis, while there are tens of thousands of manufacturing firms whose customers are all local.

The lesson is that attempts to aim resources at a few firms or industries will rarely hit those that have the greatest growth prospects or that will earn the highest return on the subsidy. The subsidies may also create unintended problems for others with better entrepreneurial talent.

Lesson 4:
Development will rarely be determined by a few large firms.

Traditional development policy operates discretely — providing a tax abatement to one firm, space in an industrial park to another, and a customized training program to a third. The cumulative role of the millions of investment decisions made by people enrolling in college, by those starting small enterprises and by state and local governments as they build and repair public works is ignored.

In the Mahoning Valley, state and local officials ignored the resources in their own community. Inducements were dangled only before large plants from outside the Mahoning Valley even though studies by the Massachusetts Institute of Technology and the Brookings Institution show that about half of new jobs are created by the birth of new companies from within the community (Birch, 1981). There are very few major plant relocations or new branchings for development officials to attract. One study found that only 1 percent of the 1,611 plants that branched over a six-year period did so for reasons associated with business climate (Schmenner, 1982).

The Roots of Traditional State Development Policy

The mistaken assumptions that supported traditional development policy for so long are not the result of a lack of economic education by public officials. They reflect quite accurately how economic theory has treated economic development and how the political process is used by those harmed by development. The most widely taught versions of economic theory — and most of the empirical work analyzing regional growth in the United States — has been based on a model in which growth occurs as the result of an increasing labor force and the accumulation of capital. Since there is little which state officials can do to increase the labor supply, the policy implication is that the only lever for state governments to pull is the one to subsidize capital, either by manipulation of the tax code or through direct subsidies for new plant construction and equipment acquisition.

At the same time, politicians have been under political pressure to assist larger employers and their constituencies. The best organized and most heavily vested stakeholders in state development programs are, in many states, those whose jobs are threatened by economic change. Established business and labor leaders unite in pushing for state action to preserve a shrinking local industry — steel in Youngstown, apparel in New York City or agriculture in Des Moines. The most obvious step is a public subsidy, and the most obvious subsidy is one given to a company to encourage it to move in or to stay. These subsidies appear to work at the margin, where the subsidy makes a difference, while a general tax credit would provide much more widely distributed windfall gains. These programs are usually held "accountable" by tying the subsidy to the number of jobs attracted per public dollar.

The result is a frenzied bidding war in which state officials negotiate with companies. Worse than a zero-sum game, state and local officials have aided those well-organized industries rather than encouraged entrepreneurship. They have focused on physical capital rather than human capital, and they have rewarded the footloose at the expense of those who cannot move.

A New View of Economic Development

The purpose of studying economics is not to acquire a set of ready-made answers to economic questions, but to learn how to avoid being deceived by economists.

— Joan Robinson, 1955

If the traditional view of how development occurs is flawed, what can replace it? What assumptions can we make that produce a plausible and useful model of economic development?

Assumption 1:
The purpose of development is to improve the community's well-being.

Economic development improves the community's well-being or creates wealth — that is, it increases the state's capacity to produce goods and services that people value. Wealth includes not only items traded in the marketplace, but also less tangible things such as environmental quality and public security. An increased capacity to produce, in turn, will generate new jobs and higher incomes. By looking beyond jobs, policies can be judged by their net contribution to the local economy, not merely by their immediate, and only apparent, employment generation.

Wealth is created as the result of millions of individual decisions — from a high-school senior's decision where to continue studies and a mill owner's decision to install new equipment, to a bank manager's decision to approve a loan to someone going into business for the first time and a restaurant's decision to change its menu.

Each of us must develop a model to enable us to understand the confusing process of economic development. The difficulty of attributing results to actions leads many policymakers to prefer policies with obvious and immediate impacts — public works projects during recessions, state lending agencies for minority businesses, or a pay increase for teachers to improve the quality of education. These policies may work where problems are small and temporary, but more serious problems require policies based on a less superficial model of the economy than that outlined above. The model employed below is described in greater detail in *Wealth of States* (Vaughan, Pollard and Dyer, 1986).

"Economic development is, therefore, a discovery process, and the discovery is best done by competition among private entrepreneurs."

Assumption 2:
Information, like all factors of production, is scarce.

Development is propelled by innovation and the exploitation of scarce information. Innovation arises from competitive pressure to find new ways to capture consumer spending, leading entrepreneurs to experiment with new goods and services, in methods of production, or to seek new markets to exploit. It is an endless discovery process — testing the viability of ideas and the imagination and the managerial skills of entrepreneurs. Opportunities arise out of the fact that all solutions to economic problems are not readily known; the twists and turns of the path of development cannot be predicted. This problem does not occur in the world of costless information postulated by neo-classical economics. There are opportunities and potential entrepreneurs in every community, but development may be blocked by barriers to entrepreneurship.

Assumption 3:
People's decisions are shaped by their own preferences and by external incentives they face when making decisions.

Science, engineering, people's imagination and changes in our economic circumstances are continually creating new opportunities. Events which to many of us seem harmful (for example, the increase in energy costs in the 1970s) create, as well as destroy, opportunities — from a boom in radar detectors to a whole industry in energy conserving devices. Communities where development lags rarely lack opportunities, although they may lack the capacity to "harvest" opportunities locally because of the absence of an entrepreneurial tradition or because of barriers to entrepreneurship — such as the lack of role models or capital, the weight of long-held tradition, or restrictions on new business activities.

Even in a devastated city such as Youngstown, there is a supply of entrepreneurs. Former Packard Electric employees set out to manufacture insulated copper wire in 1979, a venture most thought would fail. Today, Thermolink employs 50 people and can pay its founders, who worked for nearly a year with no salary. Norman Ecenrode lost his job of 37 years when a bakery closed. With his severance pay he purchased a computerized knitting machine and today is a dealer for the machine, gives lessons and sells knitted garments. Entrepreneurs like these may set up their own enterprises or may operate within existing businesses that encourage innovation. Almost all will embark on their enterprises in the community where they know the market, know local bankers, and have friends who can offer advice and assistance. The number of potential entrepreneurs who actively pursue opportunities will depend, among other variables, on the community's attitude toward entrepreneurship and failure, and the presence of entrepreneurial role models.

Pursuing an opportunity means taking risks. To find out whether new ideas are commercially viable, to develop ways of producing and marketing those ideas, and to test whether they have the skills needed to organize and manage businesses, people must invest their time and usually their money as well. Each decision that contributes to development requires an enormous amount of information — information rarely available to those examining the economy in the state capital. The consumer is the ultimate arbiter of the relative value of different ideas. The successful ideas create wealth. Even the unsuccessful ones provide experience.

Assumption 4:
Economic development requires the acquisition of assets that translate an innovation into an increased ability to produce.

Types of assets include:

- *Business Capital*

Business firms invest in plants, equipment, inventory, research and development, marketing, and frequently in political lobbying.

- *Human Capital*

Individuals seek to enhance their future earnings and to acquire the skills needed to pursue entrepreneurial opportunities by investing in education and training (classroom and on-the-job) and by moving to areas with better employment opportunities.

- *Public Infrastructure*

Local, state and federal governments are currently spending about $100 billion a year to restore, maintain and expand the nation's public works — roads, bridges, water supply and treatment, flood control, and education facilities.

The limited funds available for investment are allocated among businesses, individuals and governments

for competing projects in the capital market. Growth proceeds most rapidly if the investments with the highest expected payoffs are funded first. But real profitability is not the only factor that shapes investments. Tax and regulatory policies, the distribution of wealth and income among members of the community, and political influences on public (and sometimes on private) investments all shape the way funds flow through the capital market. State policy should depend on identifying impediments to the operation of the capital market which redirect investment funds in ways that are inconsistent with state policy goals. The appropriate treatment then may be to find ways of removing or reducing the distortion.

Assumption 5:
Economic development is accompanied by conflict, because development redistributes as well as creates wealth.

Not everyone gains more than they lose from economic development. As consumers, we all gain from the wider choices and lower prices of goods and services. But as resource owners, stockholders and employees, we may win or lose. If the company we have invested in, or work for, is beaten in the marketplace by other enterprises, we may suffer losses on investments or loss of income, against which the availability of new products will seem small compensation.

Every step in the development process is incremental because each successful venture displaces existing jobs. Sometimes the displacement is direct and obvious, such as a new restaurant on "Main Street" that leads to the closing of an old one nearby that was less successful in appealing to local consumers. Sometimes it is less obvious — for example, the successful new enterprise of making home exercise equipment has attracted consumers' spending away from scores of other activities, from bowling to visits to the local fitness center. Because consumers are choosing freely among these alternatives, we know that the new expenditure pattern represents an improvement in a community's wealth, even though some members of the community are worse off.

Those losing in a particular phase of development may try to use the political process to slow development. Even if those gaining from development outnumber those losing and the benefits of development outweigh the costs, those harmed may be better organized and more concentrated geographically. This may enable them to use the political process to seek legislative redress. They may succeed in securing protection from out-of-state imports, preferential treatment when bidding for state contracts, tax breaks, regulations limiting entry into the industry, low-interest rate loans, and other public subsidies. Preserving existing businesses is often attractive politically. Yet, in the longer run, these policies may slow the emergence of new enterprises and discourage entrepreneurs with better skills. "The ultimate result," as English philosopher Herbert Spencer once said, "of shielding men from the effects of their folly, is to fill the world with fools."

Economic development is, therefore, a discovery process, and the discovery is best done by competition among private entrepreneurs. Public policy should not aim either to reverse it, by keeping open non-economic mills, or to outguess it, by subsidizing Russian commuter jets. Development is the unpredictable result of millions of individual decisions — from deciding where to pursue further education and how to improve a local park, to resolving how to apply a new technology and where to locate a new plant. Some of these decisions create jobs; some may lead to fewer jobs. All propel development. In this model, development is not only influenced by the tax rate on, or the availability of, capital subsidies for large-scale projects, but also by the overall climate for risk-taking, or entrepreneurship. In some way, almost all state activities influence almost all these decisions.

Implications for State Development Policy

The key to sustained economic progress is the continued development of new business enterprise....The State cannot by itself create this entrepreneurial spirit, but it can help create the conditions that allow it to flourish.

— Governor Hugh Carey, New York, 1981

Development policy is a matter of identifying and helping to create the conditions conducive to entrepreneurship. This requires a far wider and more subtle touch in policy-making than the traditional approach.

States will be unable to move into new areas while they are trapped within the inevitable conflicts created by rapid economic change. Economic development redistributes as well as creates wealth. There will always be winners and losers. Even within the Mahoning Valley, most households benefitted from the same developments that led to the closing of the mills — benefits such as improved and cheaper consumer goods and 24-hour banking. However, the costs in terms of lost jobs, reduced property values and local bankruptcies probably outweighed the benefits.

To reduce these conflicts, a realistic way of dealing with displaced workers has developed with the full participation of state and local government and private employers. This is possible if the temptation to try to prevent a plant closing is resisted and those made jobless are given real help. In Youngstown, while leaders were calling for massive subsidies to reopen the plants, people continued to believe that their old jobs would reappear. Yet Youngstown's experience tells us a great deal about what works and what does not work. We know the demands that are likely to be made for mental health services, which workers are likely to experience the greatest problems, and what sort of training and help in searching for work and relocating are most effective. This type of immediate assistance must be accompanied by a long-term development strategy for the community using the model outlined above (which is described in full in Vaughan and Buss, 1986).

The following three programs illustrate an approach to economic development very different from that pioneered by Mississippi 50 years ago. (Mississippi itself has recognized the prime importance of education to its economic future. In 1982, after a bitter fight, the state enacted some major education reforms, including kindergarten for all children, higher qualifications for teachers, and increased state funding. The package was pushed and won on the importance of better education to economic development. And the private sector in the Mahoning Valley has abandoned the approach to development that has clearly failed and is building support for a development strategy based on a much broader view of what can be done to rebuild its shattered economy.)

Making Education Accountable

Despite the growing importance of investments in education and skills, recommendations from task forces overlook entirely the absence of performance-oriented management from most public education and training programs or any rewards for good performance and sanctions for poor performance — characteristics central to business management. Accountability has been resisted as education has not been regarded as relevant to the state's economic fortunes. This is changing.

For example, in 1985, Arizona initiated a program of measuring the placement rates and earnings of graduating classes from public and private post-secondary training institutions. Each school provides the state with the Social Security numbers of those graduating from training programs. The Department of Economic Security matches the numbers against its unemployment insurance files to determine for each program and for each institution their placement rates and average earnings. The results are published and made available to everyone contemplating post-secondary training. This provides prospective students with invaluable information about the economic benefits of different institutions and programs, as well as gives administrators a measure of where students are being taught most effectively. It is a major step toward accountability.

Infrastructure

The deterioration of roads, bridges, water systems and other components of the nation's infrastructure became a national issue at the beginning of the decade. Providing and maintaining public transportation networks, water supplies and other public amenities are likely to be far stronger development inducements than the largest tax abatement. Most states have diagnosed the problem as inadequate spending (see Vaughan, 1982, Leonard, 1986).

Yet more money is only a part — and certainly not the main part — of a solution. State and local governments plan and budget infrastructure investments poorly. Few systematically keep tabs on the condition of the vast networks for which they are responsible. Because consequences of underinvestment in capital maintenance do not show up on the budget, the item is easily excised when budgets are tight. General revenues are used to finance items that could easily be paid for through user fees. Many businesses have the budgeting expertise that would prove valuable to states.

Some states have started to look beyond spending. The State of Washington has conducted a widely emulated survey of the condition of its public works. California regularly assesses the cost of a project under alternative financing scenarios. New Jersey has a Planning and Budgeting Commission that ensures that different agencies are using similar assumptions about the future.

Perhaps the best state infrastructure program has been run by North Carolina for 50 years. Other states will find the Local Government Commission a valuable model as the fiscal and administrative responsibilities for infrastructure devolve from Washington. The Commission helps small towns prepare bond offerings by providing budgeting and financing advice, preparing prospectuses, and marketing. This avoids one of the most widespread problems in public works financing — the lesser accountability associated with using someone else's money. Many classes of public works are undertaken by one level of government and financed by a higher level. With all the paperwork in the world, people are never as careful in spending someone else's money as their own. The local governments save up to one full percentage point on the interest rate for the bonds and the Commission covers all its expenses with a small fee.

Policy Management

While most state activities were not felt to influence the economy, they were usually beyond the reach of traditional management tools. Cities experimented with targets for garbage collection and other measurable services, and Georgia experimented with zero-base budgeting. But, by and large, states have yet to succumb to accountability.

Over the past five years, Florida has been developing a comprehensive, but flexible, system that should be a model to other states. In 1981, agencies were required to submit program performance measures to accompany their budget requests that reflected the governor's written priorities. Since agencies were not familiar with management information systems or did not take the request seriously, this was not successful. So Governor Bob Graham requested his staff to negotiate performance agreements with each agency for the most-priority 25 percent of the agencies' programs. Within two years, the negotiated measures — which included how many additional organic contaminants would have standards set and how many patients in the state mental health hospitals would be placed in alternative community settings — could be used to assess agency effectiveness. By 1986, the agreements covered 182 measures in 11 agencies, and the governor meets quarterly with agency heads to review

their successes and failures.

Too often economic policy disputes center around the need to increase or reduce taxes. Yet neither side has the information needed to determine whether the taxpayers' money can be effectively used. Elementary management information systems are a first step toward resolving this otherwise arid discussion.

Conclusion

The steel industry will not revive Youngstown. Neither will any other durable manufacturing industry. The Mahoning Valley will recover largely on the entrepreneurial energies of people already living there. These entrepreneurs will need the support of a sound educational system, decent roads, and state and local programs that are accountable to the people who pay for them. These are old concerns, but they must be dusted off and assume center stage in the state's and the Valley's economic development strategies.

There is, however, no organized constituency in support of a new economic policy, and such a policy is not easy to convey to voters. It requires complex and often politically unappealing actions. And it is difficult because a new policy requires us to abandon economic models that have been in use for half a century.

It is difficult, but not impossible.

Periods of rapid technological progress shake up the structure of industry — weakening some, strengthening others and sowing the seeds of new ones. This causes shifts and realignments in the interest groups that may break policy logjams. Public and private leaders may find a new consensus behind issues, allowing state development policy to reflect the changing economy.

Part of the new consensus may be drawn from those concerned with policies to assist the poor and those who traditionally have been rejected by officials responsible for economic development. The trade-off between the pursuit of economic efficiency or growth and the pursuit of greater equity has been at the core of the teaching of economic policy. Yet in the more complex world of state policymaking, many of the barriers that are tackled by entrepreneurial policies have mounted the greatest hurdle to those with low incomes. A more responsive vocational education system will benefit those who, at present, have access to the poorest quality schools. Assistance in capital budgeting and bond marketing will primarily benefit poor communities. And none of the several programs discussed had to establish a special window or special set-asides to reach these people.

Author's Note: This paper draws upon ideas presented in greater detail in Roger Vaughan, Robert Pollard and Barbara Dyer, ***Wealth of States****, Washington, D.C., Council of State Policy and Planning Agencies, 1986. Barbara Dyer, director for Policy of the Council of State Policy and Planning Agencies, provided valuable comments on an earlier draft of this paper.*

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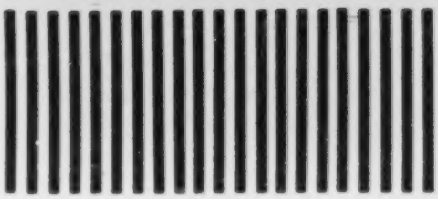

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Ohio Economic Trends Review

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Ohio Economic Trends Review

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The Marriage Penalty Under the Ohio Income Tax:

The Effects of Recent Changes In State and Federal Law

By John H. Beck

In structuring an income tax, there is an inherent contradiction between the three goals of progressivity, equal treatment of couples with equal incomes, and marriage neutrality. This article illustrates the marriage penalties and bonuses occurring under the Ohio income tax and describes how these penalties will be exacerbated by recent federal tax reforms. Some alternative policies are suggested that would improve current policy with respect to one or more of the three goals. (Note, however, that the alternative policies cannot attain all three of these inconsistent goals.)

A progressive income tax with graduated marginal tax rates may impose a "marriage penalty" on two-earner couples by making their tax burden greater than the sum of the tax burdens they would each bear as single individuals with the same individual earnings. The Ohio income tax imposes significant marriage penalties despite some provisions to reduce the tax burden on two-earner couples. This article demonstrates how the elimination of the federal second-earner deduction will exacerbate these problems.

Progressive Income Taxes, Treatment of Married Couples

As Munnell has pointed out (1980, p. 247), the tax treatment of married couples under an income tax with graduated marginal tax rates presents a dilemma because of the inconsistency of three appealing goals:

(1) The tax structure should be progressive.

(2) Married couples with the same income should pay the same amount of taxes, regardless of how much is earned by each spouse.

(3) The income tax should be neutral with regard to marital status — that is, the total tax paid by two single individuals should be the same amount as they would pay as a married couple with the same income.

Goal (1) is commonly achieved through a graduated income tax structure, with higher marginal tax rates applied at higher levels of income.[1] Goal (3) could be achieved by treating the individual as the tax-paying unit, taxing all individuals' incomes according to the same rate schedule regardless of their marital status. Goal (2) could be achieved by treating the family as the tax-paying unit, taxing the combined incomes of all married couples according to the same rate schedule. The history of the federal personal income tax in the United States reveals the problems inherent in these approaches.

From 1913 to 1948 the federal personal income tax was a tax on individual incomes. However, in some states that had community property laws, a wife who had no income of her own would file a federal tax return reporting half her husband's income as hers, and her husband would report only half his income on his own return. If the income was "split" between husband and wife in this manner, it was taxed at a lower marginal tax rate than if the husband had reported all of the income on his own return. Consequently, a married couple in a community property state could pay less in federal income tax than another couple with the same income in a non-community-property state. To eliminate this inequity among married couples, in 1948 Congress extended the opportunity for "income splitting" to couples in all states by allowing married couples to file joint returns reporting their combined incomes. Because the brackets on the joint return schedule were originally twice as wide as the brackets on the separate return for individuals, a married couple filing a joint return would have their income taxed at the same marginal tax rate as if they had filed separate returns, each reporting half their combined income.

While the introduction of the joint return solved the problem of inequity among married couples, it created a new inequity. The opportunity for income splitting by married couples created a tax saving for pairs of individuals with unequal incomes if they married and filed a joint return. Consider a man with a $30,000 income who married a woman with a $10,000 income. Before marriage, the last $10,000 of his income was taxed at the marginal tax rates on the separate return schedule in the $20,000-$30,000 range. After marriage, it would be taxed at the lower rates in the $30,000-$40,000 range on the joint return schedule. Thus, income splitting created a "marriage bonus" violating the marriage neutrality goal.

To reduce this marriage bonus, in 1969 Congress created a new single return rate schedule with tax rates rising more slowly than the rates on the married-filing-separately return, but still rising more rapidly than the rates on the joint return schedule. This "reform" created a "marriage penalty" for some couples, particularly when spouses' individual earnings were close to equal. Two persons with equal individual earnings would be taxed at

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Table 1
Ohio Income Tax Rate Schedules, Exemptions and Joint Filer Credits

Ohio Taxable Income	1973-1981	1984	1988*
	Marginal Tax Rate		
less than $5,000	.5%	.95%	.743%
$5,000–$10,000	1.0	1.90	1.486
$10,000–$15,000	2.0	3.80	2.972
$15,000–$20,000	2.5	4.75	3.715
$20,000–$40,000	3.0	5.70	4.457
$40,000–$80,000	3.5	6.65	5.201
$80,000–$100,000	3.5	7.60	5.943
over $100,000	3.5	9.50	6.900
	Joint Filer Credit**		
less than $10,000	20%	20%	
$10,000–$20,000	12	20	
$20,000–$25,000	5	20	
$25,000–$50,000	5	15	
$50,000–$75,000	5	10	
over $75,000	5	5	
	Exemptions		
Per taxpayer, spouse and dependent	$650 deduction from AGI	$1,000 deduction from AGI, or $650 deduction and $20 credit***	

*The tax rates shown for 1988 incorporate the 8 percent tax cut enacted in the fall of 1986, as well as the tax reductions previously enacted in 1985.
**The credit is a percent of total tax due after all other credits are taken. To be eligible, each spouse must have an adjusted gross income of $500 or more excluding interest, dividends, royalties, rent and capital gains.
***The $1,000 exemption is the more advantageous option for taxpayers with Ohio taxable income over $40,000 in 1984 or over $80,000 in 1988. The $650 exemption plus $20 credit is the more advantageous option for those with less taxable income.

higher marginal tax rates and pay more in taxes if they were married than if they were unmarried, using the single rate schedule. The federal income tax still was not neutral with regard to marriage, but it now provided a marriage bonus or penalty depending on whether spouses' individual incomes were very unequal or close to equal.

Because the marriage penalty arose in cases where spouses had close to equal earnings, in 1981 Congress attempted to reduce the marriage penalty by providing tax relief that increased with the earnings of the spouse with the lower individual earnings. Specifically, Congress provided that, in calculating federal Adjusted Gross Income (AGI), couples filing joint returns could deduct 10 percent of the earned income (wages, salaries and tips) of the spouse with the lower earned income, but not more than 10 percent of $30,000. However, as Munnell has pointed out (1982, p. 246), "the alleviation of the marriage penalty was purchased at the expense of the principle of equal treatment of couples with equal income....the tax burden of a married couple varies with the distribution of earnings between the spouses." These continuing inequities are not due to lack of intelligence on the part of those who write our federal tax laws, but to the inherent inconsistency of the three goals set forth at the beginning of this section.

Treatment of Married Couples Under the Ohio Income Tax

Unlike the federal income tax, Ohio has only one rate schedule (see Table 1), which is used by single persons, married couples filing joint returns and married persons filing separate returns. Thus, there are no income-splitting advantages to be gained from the use of the joint return insofar as the Ohio income tax liability is concerned. Two-earner couples could obviously reduce their combined Ohio income tax liability by filing separate returns. However, married Ohio taxpayers may file separate state returns only if they also file separate federal returns. Unless spouses' incomes are very nearly equal, income splitting usually makes it advantageous to file a joint federal return. Thus, only 1,055,322 separate federal returns for 1982 were filed by married persons, compared with 44,059,584 joint returns (Holik, 1985, pp. 5-6). In Ohio for 1982, married persons filed 88,443 separate state returns, compared with 2,074,762 joint returns (Ohio Department of Taxation, 1985, pp. 63-64). Thus, the ratio of separate to joint returns is higher (.043) in Ohio than nationally (.024), but separate returns still represent less than 2.2 percent of married couples.

Because the same rate schedule is used for joint and single returns under the Ohio income tax, the use of a joint return creates a marriage penalty for two-earner couples under the state income tax. To alleviate this, in 1972 the Ohio General Assembly passed legislation (first in effect for the 1973 tax year) providing for a "joint filer credit" for couples filing joint returns with both spouses reporting over $500 of wage or salary income. As Table 1 illustrates, this credit was a percentage of the total tax liability of qualified couples, with the percentage declining as a couple's income increased.

Tax rates and the treatment of married couples under the Ohio income tax remained unchanged from 1973 until 1981. Despite the joint filer credit, marriage penalties remained at many income levels, although in some cases the joint filer credit created a small marriage bonus. This is illustrated in Table 2, which shows marriage penalties at various income levels and for different proportions of income earned by each spouse. For example, the fourth row of Table 2 shows that without the joint filer credit a couple with $100,000 in income filing a joint return would have owed $2,954.50 in state income tax. If they individually earned $90,000 and $10,000 and filed separate returns, their combined state tax liability would have been only $2,695.75. Assuming federal tax considerations dictate that they file a joint return, without the joint filer credit this hypothetical couple would have paid a marriage penalty of $258.75 in additional state income tax. The joint filer credit of $147.73 would have reduced this marriage penalty to $111.02.

There are a number of peculiar effects of the joint filer credit formula. First, except for the requirement that both spouses earn $500 to qualify, the joint filer credit did not depend on what proportions of combined income

were earned by the individuals. Yet, as Table 2 shows, the marriage penalties were higher for couples with more nearly equal individual incomes (for example, when one spouse earned 60 percent and the other 40 percent of their combined income) than for couples with very unequal individual incomes (for instance, when one spouse earned 90 percent of the combined income). In this respect, the joint filer credit does not provide the most relief to those couples with the largest marriage penalty. Instead, it adheres to the principle that two-earner couples with the same combined income should pay the same amount of tax.

Second, for any given earnings split, without the joint filer credit the marriage penalty as a proportion of total taxes (that is, the difference of columns 2 and 3 divided by column 2 in Table 2) — was larger at a combined income of $25,000 than at either $10,000 or $50,000. Yet the joint filer credit was a larger proportion of the total tax liability in the lower-income ranges (20 percent below $10,000 income and 12 percent between $10,000 and $20,000) than at a $25,000 income (5 percent). Indeed, the joint filer credit was so large relative to the potential marriage penalty that with a 90:10 or 75:25 earnings split there were small marriage bonuses at the $10,000 income level.

A third problem with the declining joint filer schedule is that it created a "notch" effect. For example, at a taxable income of $19,999 the tax liability before credit would have been $299.98, which would have been reduced by 12 percent to $263.98 with the joint filer credit. At a taxable income of $20,001, the tax liability before credit would have been $300.03, which would have been reduced by 5 percent to $285.03 with the joint filer credit. A $2.00 increase in income, from $19,999 to $20,001, would have increased taxes by $21.05.

A number of changes in tax laws in the early 1980s affected the marriage penalty under the Ohio income tax. First, because federal adjusted gross income is used as a starting point in calculating taxable income, the 1981 federal law introducing the 10 percent deduction for two-earner couples beginning in 1983 reduced state as well as federal income taxes for such couples. While this change in federal law reduced the marriage penalty under the state income tax, changes in the Ohio income tax rate structure increased it. Two additional brackets with higher marginal tax rates for the $80,000-$100,000 and over $100,000 taxable income ranges went into effect for 1982. Also, after a period of "temporary" tax surcharges, "permanently" higher tax rates for all brackets were set at the rates shown for 1984 in Table 1. To offset the resulting increased marriage penalties, the joint filer credit for 1984 and thereafter was made somewhat more generous, as is also shown in Table 1.

Table 3 shows marriage penalties at various income levels and for different proportions of income earned by each spouse under the tax law applicable in 1984. Because of the higher marginal tax rates and because the joint filer credit was still only 5 percent for taxable incomes

Table 2
Ohio Marriage Penalties and Joint Filer Credits, 1973–81

(1) Combined AGI	(2) Tax on Joint Return*	(3) Tax on Separate Returns	(4) Joint Filer Credit	(5) Tax on Joint Return**	(6) Marriage Penalty or (Bonus)***
		90:10 Earnings Split			
10,000	62.00	60.25	12.40	49.60	(10.65)
25,000	411.00	364.75	20.55	390.45	25.70
50,000	1,204.50	1,074.00	60.23	1,144.27	70.27
100,000	2,954.50	2,695.75	147.73	2,806.77	111.02
		75:25 Earnings Split			
10,000	62.00	52.75	12.40	49.60	(3.15)
20,000	267.50	183.75	32.10	235.40	51.65
25,000	411.00	283.50	20.55	390.45	106.95
35,000	711.00	524.00	35.55	675.45	151.45
50,000	1,204.50	917.50	60.23	1,144.27	226.77
100,000	2,954.50	2,532.75	147.73	2,806.77	274.02
		60:40 Earnings Split			
10,000	62.00	45.25	12.40	49.60	4.35
20,000	267.50	150.50	32.10	235.40	84.90
25,000	411.00	230.50	20.55	390.45	159.95
35,000	711.00	452.50	35.55	675.45	222.95
50,000	1,204.50	864.25	60.23	1,144.27	280.02
100,000	2,954.50	2,457.75	147.73	2,806.77	349.02

*With two $650 exemptions and before joint filer credit
**After joint filer credit
***Column 5 minus column 3

over $75,000, the marriage penalties were quite a bit larger than in 1973-81 at the $100,000 income level.[2] On the other hand, for 1984 larger marriage bonuses appeared in the $10,000 to $50,000 income range for couples with an earnings split of 90:10, and the marriage penalties for a 75:25 earnings split were reduced in the $25,000 to $50,000 income range compared with those for 1973-81.

In some cases the penalties remaining after the joint filer credit were quite large in proportion to the total state income tax liability. Among the cases in Table 3 for example, at $25,000 income with a 60:40 earnings split the marriage penalty without the joint filer credit was nearly 40 percent of the state income tax liability before the credit and two-earner deduction. After the 20 percent joint filer credit, there remained a marriage penalty that was more than 20 percent of the income tax liability. At $100,000 with either a 75:25 or 60:40 earnings split, the marriage penalty was approximately 15 percent of the state tax liability, as Table 4 shows. The 5 percent joint filer credit left these couples with a marriage penalty approximately 10 percent of their tax liability.

These proportions of state tax liability raise serious equity issues even if the absolute amounts are not large enough to actually affect marriage decisions. In addition to these equity issues, joint filing may impair economic efficiency by raising marginal tax rates on married women compared with the marginal tax rates they would face if

they were single. Taxes have been shown to be a significant disincentive to the participation of married women in the labor force (Leuthold, 1984).

The joint filer credit entails substantial revenue loss for the state ($43,675,208 in 1982), and the number of taxpayers affected is also quite large. Of the 2,074,762 joint returns filed in Ohio for 1982, more than half — 1,044,844 — claimed the joint filer credit, and 654,293 of those claiming the credit had federal AGI in excess of $25,000 (Ohio Department of Taxation, 1985, p. 65), the income range in which the marriage penalty *may* be largest. Of course, this depends on whether the earnings contributed by both spouses are close to equal — as in the 60:40 earnings split cases — or very unequal — as in the 90:10 earnings split cases.

In 1985 the Ohio General Assembly cut tax rates in all brackets by 10 percent effective July 1, 1985 (equivalent to a 5 percent reduction for the entire 1985 tax year and an additional 5 percent cut for 1986). Tax rates were scheduled to be reduced by an additional 5 percent on January 1, 1987. With the revenue gains from expansion of the tax base due to federal tax reform, in the fall of 1986 the General Assembly enacted an 8 percent tax cut, beginning in 1987 and fully effective in 1988. These tax cuts would tend to reduce the absolute size of marriage penalties under the state income tax. On the other hand, federal tax reform eliminating the 10 percent deduction for two-earner couples will raise Ohio tax liabilities for such couples.

Table 5 shows the combined effect of the state tax cuts and the elimination of the federal two-earner deduction. Despite the reduction in state tax rates, the elimination of the two-earner deduction will cause marriage penalties to increase in absolute size in 1988. For instance, the marriage penalty for a couple with a $100,000 income split 60:40 will increase to $651 in 1988 compared with $608 in 1984.

Alternative State Income Tax Policies

There are several policy alternatives that Ohio might consider for taxing the income of married couples. Although these policies cannot overcome the inherent conflicts among competing goals, they would be improvements over existing policy — that is, they would alleviate the inequity of the marriage penalty and reduce marginal tax rates that discourage the participation of married women in the labor force.

In 1982 the Joint Committee to Study State Taxes (Ohio General Assembly, 1982, p. 12) recommended

> *that the state use a dual rate system: one set of rates for single returns and another for joint returns. The purpose of the separate schedules would be to establish a relationsnip between rates applied to single returns and joint returns that is approximately the same as the difference in rates applied to each such return under the federal income tax. The dual rate structure would replace the joint filer credit used under current law, which is inadequate because it only benefits married couples where both spouses have earned income.*

This policy would achieve horizontal equity among all married couples where there is an inequity between one-earner and two-earner couples under current policy. However, it would violate the principle of marriage neutrality because income splitting would result in substantial marriage bonuses for couples with very unequal individual earnings.

Another alternative is to treat the individual, rather than the married couple, as the taxpaying unit. This approach has been used by the State of Wisconsin, although beginning in 1986 that state shifted to the use of different rate schedules for joint, married-filing-separately and single returns, similar to the federal approach. Prior to 1986, a Wisconsin couple filing a joint federal return filed one state income tax form as well, but income and tax liability was calculated separately for each individual. Wages, salaries and investment income from assets held solely by one spouse were attributed to that individual. Investment income from jointly-owned assets was divided equally between the two spouses.

Treating the individual as the taxpaying unit has

Table 3
Ohio Marriage Penalties and Joint Filer Credits, 1984

(1) Combined AGI	(2) Tax on Joint Return*	(3) Tax on Separate Returns	(4) Tax Saving from Federal Deduction**	(5) Joint Filer Credit	(6) Marriage Penalty or (Bonus)***
		90:10 Earnings Split			
10,000	77.80	91.15@	1.90	15.18	(30.43)
25,000	740.90	655.45	14.25	145.33	(74.13)
50,000	2,242.00	1,997.33	33.25	331.31	(119.89)
100,000	5,738.00	5,164.15	76.00	283.10	214.75
		75:25 Earnings Split			
10,000	77.80	62.65	4.75	14.61	(4.21)
20,000	468.25	309.13	23.75	88.90	46.47
25,000	740.90	511.00	35.62	141.06	53.22
35,000	1,310.90	955.60	49.88	189.15	116.27
50,000	2,242.00	1,703.25	83.12	323.83	131.80
100,000	5,738.00	4,738.95	190.00	277.40	531.65
		60:40 Earnings Split			
10,000	77.80	43.49	7.60	14.04	12.67
20,000	468.25	245.95	38.00	86.05	98.25
25,000	740.90	397.95	57.00	136.78	149.17
35,000	1,310.90	819.75	79.80	184.67	226.68
50,000	2,242.00	1,602.08	133.00	316.35	190.57
100,000	5,738.00	4,626.45	228.00	275.50	608.05

*With two exemptions but without federal deduction or joint filer credit
**The amount deducted is 10 percent of the wages and salary of the spouse with the lower earned income, with a maximum deduction of $3,000. The tax saving shown in column 4 is the amount deducted multiplied by the state marginal tax rate.
***Column 2 minus columns 4 and 5 is the actual Ohio tax liability for the hypothetical two-earner couples after the joint filer credit. This amount minus column 3 is the "marriage penalty" shown in column 6.
@The combined tax for two individuals filing separate returns, one with $9,000 income and the other with $1,000, exceeds the tax for a couple filing a joint return with $10,000 income because the individual with only $1,000 in income cannot fully utilize the $20 tax credit per exemption. Subtracting the $650 personal exemption leaves a taxable income of $350 and a tax liability of only $3.33 before the credit is taken.

the advantages of eliminating any marriage penalty and reducing marginal tax rates on two-earner couples. However, taxing individual incomes results in unequal treatment of married couples with equal combined incomes, depending on the proportion of combined income attributed to each spouse. Another disadvantage of this approach is the added complexity for taxpayers who must calculate their individual incomes for their state returns rather than merely using their combined AGI from their federal joint returns.

A third policy to attain marriage neutrality is to adopt a tax structure with a constant marginal tax rate rather than a graduated rate structure. The State of Michigan does this and yet maintains a fairly progressive tax structure by allowing large personal exemptions ($1,500 in 1983) and a "circuit breaker" credit for property tax burdens in excess of 3.5 percent of income. With a large exempt income — $6,000 for a family of four — the *average tax rate* (total tax divided by total income) rises with income even with the constant marginal tax rate in Michigan. Due to the circuit breaker and the large exemptions, Michigan's income tax was almost as progressive as Wisconsin's graduated income tax, according to Phares (1980, pp. 122-123). There is generally no marriage penalty or bonus under the Michigan income tax because usually the same marginal tax rate is applied to income before and after marriage. Michigan's tax achieves marriage neutrality, horizontal equity among married couples and a fair degree of progressivity. The major objection to the constant marginal tax rate is that, although large exemptions can achieve a fairly progressive structure throughout most of the range of incomes, a graduated rate structure may be necessary to attain the desired degree of progressivity in the highest income range.

If retention of a graduated rate structure is desired, reform policies might focus on changes in the joint filer credit or introduction of a state deduction of some percentage of the earnings of the lower-earning spouse similar to the 10 percent federal deduction. As previously noted, the deduction places a priority on marriage neutrality at the expense of horizontal equity among married couples. If state policymakers in Ohio have this priority of goals, they might consider abolishing the joint filer credit and providing for the deduction of some percentage greater than 10 percent of the earnings of the lower-earning spouse. Table 4 shows the ratio of the marriage penalty before deductions and credits to the tax savings from the 10 percent deduction for various income levels and earnings splits under 1984 state tax rates. For all but one of the cases shown, this ratio is between 3.19 and 7.55, suggesting that allowing a deduction of between 30 and 70 percent of the earnings of the spouse with lower income would further the marriage neutrality goal[3]

The fact that in 1983 the Ohio Legislature chose to make the joint filer credit more generous suggests that it placed a priority on the goal of equal treatment of married couples. If this is true, there are some further reforms in the joint filer credit that might maintain equity among married couples and improve marriage neutrality as well. First, since the personal exemption has been increased to $1,000 and the alternative $20 credit with a $650 exemption is worth more than a $1,000 exemption in the lower tax brackets, it seems appropriate that the threshold to qualify for the joint filer credit be increased from $500 to at least $1,000 earned income by each spouse. A person with individual earnings less than $1,000 brings a tax benefit to a higher-earning marriage partner in the form of the underutilized exemption; therefore, the additional benefit from the joint filer credit seems inappropriate in this case.

Second, the "notch effect" noted above, which arises from the abrupt reduction in the percentage of *total* tax liability taken as a credit as certain income thresholds are exceeded, could be eliminated by calculating the joint filer credit according to a schedule with declining *marginal* rates. For example, if the joint filer credit was based on declining *marginal* percentages of the tax liability (using the 1988 tax schedule) equal to the current *average* joint filer rates, the credit might be calculated as follows:

If total tax liability is	Joint filer credit is
less than $669	20 percent of tax liability before credit
between $669 and $1,857	$134 plus 15 percent of tax in excess of $669
between $1,857 and $3,148	$312 plus 10 percent of tax in excess of $1,857
above $3,148	$441 plus 5 percent of tax in excess of $3,148

Table 4
Ratios of Marriage Penalty to Tax Liability and to Benefits of 10 Percent Deduction

Combined AGI	Ratio of Marriage Penalty to Total Tax Liability*	Ratio of Marriage Penalty to Benefits of 10 Percent Two-Earner Deduction**
	90:10 Earnings Split	
10,000	−.1945	−7.03
25,000	.0961	6.00
50,000	.0943	7.36
100,000	.0868	7.55
	75:25 Earnings Split	
10,000	.1337	3.19
20,000	.2891	6.70
25,000	.2622	6.45
35,000	.2330	7.12
50,000	.2031	6.48
100,000	.1410	5.26
	60:40 Earnings Split	
10,000	.3433	4.51
20,000	.3936	5.85
25,000	.3859	6.03
35,000	.3138	6.15
50,000	.2261	4.81
100,000	.1540	4.88

*Calculated from Table 3 by subtracting columns 3 and 4 from column 2 and dividing by column 2
**Calculated from Table 3 by subtracting column 3 from column 2 and dividing by column 4

Table 5
Ohio Marriage Penalties and Joint Filer Credits, 1988

(1) Combined AGI	(2) Tax on Joint Return*	(3) Tax on Separate Returns	(4) Joint Filer Credit	(5) Tax on Joint Return**	(6) Marriage Penalty or (Bonus)***
		90:10 Earnings Split			
10,000	52.13	66.93@	10.43	41.70	(25.23)
25,000	570.71	508.25	114.14	456.57	(51.68)
50,000	1,749.69	1,555.76	262.45	1,487.24	(68.52)
100,000	4,487.34	4,034.26	224.37	4,262.97	228.71
		75:25 Earnings Split			
10,000	52.13	44.64	10.43	41.70	(2.94)
20,000	357.51	233.05	71.50	286.01	52.96
25,000	570.71	381.28	114.14	456.57	75.29
35,000	1,016.41	738.61	152.46	863.95	125.34
50,000	1,749.69	1,323.24	262.45	1,487.24	164.00
100,000	4,487.34	3,723.42	224.37	4,262.97	539.55
		60:40 Earnings Split			
10,000	52.13	27.24	10.43	41.70	14.46
20,000	357.51	183.64	71.50	286.01	102.37
25,000	570.71	302.53	114.14	456.57	154.04
35,000	1,016.41	632.41	152.46	863.95	231.54
50,000	1,749.69	1,244.18	262.45	1,487.24	243.06
100,000	4,487.34	3,611.82	224.37	4,262.97	651.15

*With two exemptions but without joint filer credit
**After joint filer credit
***Column 5 minus column 3
@The combined tax for two individuals filing separate returns, one with $9,000 income and the other with $1,000, exceeds the tax for a couple filing a joint return with $10,000 income because the individual with only $1,000 in income cannot fully utilize the $20 tax credit per exemption.

This approach provides more tax relief to two-earner couples with a combined income above $25,000 where the absolute size of the marriage penalty is greatest, but the declining marginal credit rates seem appropriate given the fact that the ratio of the marriage penalty to tax liability shown in Table 4 declines as income increases. In most cases, this ratio is greater than the credit proposed above, so larger percentages might be considered.

The joint filer credit treats all two-earner couples with the same combined income equally, but it taxes a one-earner couple with the same income more heavily. There is some justification for this unequal treatment. Munnell (1982, p. 246), discussing the 10 percent federal deduction, argues:

> *...The difference in tax liabilities between the one-earner couples and the two-earner couples is a desirable result of the new deduction, since the two-job couples incur additional expenses or lose the untaxed household services or additional leisure by virtue of the secondary earner's job. However, the differentiation among the two-earner couples based on the distribution of earnings may be more difficult to rationalize. To the extent that the differences among the two-job couples are due to fewer hours of employment, the variation in tax burden could be interpreted as reflecting lower wage expenses and more time to perform household services or additional leisure time. However, if the secondary wage earner in each case is engaged in full-time employment, it is harder to justify a differential in tax liability.*

Those who accept Munnell's arguments will find the joint filer credit preferable to a deduction based on the earnings of the "lower-earning" spouse. Those who place priority on the marriage neutrality goal will prefer a state deduction of between 30 and 70 percent of the earnings of the lower-earning spouse. The elimination of the federal two-earner deduction makes these state reforms especially desirable.

Notes

1. A fairly progressive tax structure could be achieved with a constant marginal tax rate applied to all income above a relatively large exempt amount. This would result in an average tax rate that increases with income despite the constant marginal rate and would avoid most of the problems in the treatment of marital status. Refer to the remarks about Michigan's income tax in the third section of this paper.
2. In the 60:40 earnings-split case, the 10 percent federal deduction is also of limited benefit because only the maximum of $3,000, rather than $4,000, may be deducted.
3. The calculations in Table 4 and the policy recommendation here assume that the deduction for a second earner continues to be limited to a percentage of earnings up to $30,000.

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Dayton:
Reflecting on a Rich Past, In Search of a Dynamic Future

By John E. Weiler

As you look out the window of the general manager's office at Inland Division of General Motors, you see the gray curved tops of two of the original buildings, built when Inland was the Dayton Wright Airplane Company. On one of the office walls is an aged organizational chart for the company of the Wright brothers' fame. On the chart, among other notable names, is Wilbur Wright, listed as chief of the engineering division.

This is just one example of Dayton's rich past, filled with developments on the leading edge of manufacturing technology, particularly in the transportation industry. Dayton native Charles F. Kettering developed the electric starter, and Daytonians know that DELCO originally meant the Dayton Electronics Laboratory Company. The work of Kettering eventually led to the location of four GM divisions in Dayton.

Dayton became a minor boomtown with the completion of the first leg of the Miami and Erie Canal in 1828. By 1830, Dayton's population had grown to almost 2,800. Early efforts at manufacturing centered on farm machinery parts and then evolved into tool-and-die production and transportation equipment. The direction of Dayton's development also was influenced by the production of John Patterson's cash register and the post-World War construction of Wright Patterson Air Force Base, which is a major area employer.

In 1970, the Dayton area continued to reflect its history. Manufacturing constituted almost 40 percent of total employment in the area, a level well above the national average. (It had remained at that level for at least 30 years.) Population increased by 16.7 percent from 1960 to 1970, compared with the U.S. rate of 13.3 percent.

In 1980, however, Daytonians viewed a very different economy. During the 1970s, for the first time, the region's population dropped. Manufacturing employment fell to 27 percent of total local employment. John Patterson's National Cash Register (NCR) had closed most of its production operations. There no longer was a Frigidaire plant. Dayton, like so many Midwestern cities, looked toward a very uncertain future.

Today, the Dayton-Springfield area shows signs of recovery and growth. The metropolitan area — which includes Clark, Greene, Miami and Montgomery counties — has been experiencing population increases. In 1985, for example, the population rose to 447,900. Also, employment has been growing, and during the past five years the unemployment rate has remained consistently below the Ohio average.

The Decline of Manufacturing: An Irreversible Trend?

In 1969, manufacturing employment peaked in the Dayton area, when almost 42 percent of total local employment was in manufacturing, compared with a national average of 29 percent. By 1979, the percentage of Dayton MSA employment in manufacturing had fallen to 30 percent; currently, it is down to about 25 percent.

Much of the decline during the past 25 years has been associated with the disappearance of "historically significant" employers. The decline began with NCR and the loss of almost 16,000 manufacturing jobs at the beginning of the 1970s. Within the next 10 to 12 years, Dayton-area workers witnessed the closing of the Frigidaire plant by General Motors, the disappearance of Dayton Press and the closing of Dayton Tire and Rubber. Only with the conversion of the Frigidaire plant to the production of GM trucks has there been a significant replacement of lost jobs.

Each of these four plant closings was caused by conditions unique to the individual companies. However, each also appeared to share some characteristics common to many Midwest businesses:

- First, each company was a multiplant firm with operations in other areas; the cessation of Dayton operations did not mean the parent company would go out of business. Instead, deliberate decisions were made to discontinue a product line or to change the location of operations.
- Second, each firm was brought to a "long-run" decision by changes in the nature of the market for its product or changes in production techniques. NCR and Dayton Tire found they were producing an outmoded product. GM recognized that a basic change had occurred in the home appliance industry. Dayton Press found that it could not be competitive using a plant based on outmoded technology.
- Third, with the exception of General Motors, each company chose to remedy its problem, but not in Dayton.

Figure 1 shows manufacturing and total employ-

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Table 1
Percentage Change in Employment, 1983–1985

	Ohio	Dayton	Cleveland	Youngstown-Warren
Durable Goods	17.7	49.1	3.6	0
Non-Electrical Machinery	17.2	44.1	11.1	- 5.1
Transportation Equipment	58.2	162.5	- 7.9	11.1
Non-Durable Goods	19.5	24.2	15.4	20.0

Source: Labor Market Information Division, Ohio Bureau of Employment Services

ment in the Dayton MSA from 1975 to 1985. (Note that by 1975 manufacturing employment already had fallen by 34,000 from its peak in 1969.) Manufacturing employment, along with total employment, has moved in a manner consistent with business cycle activity during the period. However, an unmistakable downward trend in manufacturing employment also is evident. By 1985, overall employment had returned to its peak of 1979. (In fact, overall employment reached record highs in 1986.) However, even though manufacturing employment had recovered from the recession, it remained 20,000 jobs below the 1978 peak.

Despite this downward trend, the recovery from the 1982-83 lows in manufacturing employment has been substantial. An examination of Figure 2 reveals the significance of this improvement, as compared with other Ohio metropolitan areas. It appears obvious that Dayton's problems are different from those facing such cities as Akron, Cleveland and Youngstown-Warren.

In Ohio from 1979 to 1985, the larger manufacturing job losses have been in durable, rather than non-durable, goods. For this period, employment in durable-goods industries fell 21.5 percent, compared with an 11.9 percent decline in the non-durable-goods sector. This reflects a more drastic decline in employment from 1979 to 1983, as well as a more anemic recovery. Within the durable-goods sector, the major declines were in primary metals, non-electrical machinery, and electric and electronic equipment. During the 1983-85 recovery, transportation equipment and non-electrical machinery were big gainers.

Two factors account for the relatively strong recovery in the Dayton-Springfield area. First, Dayton is not as dependent as some other metropolitan areas on "problem industries," such as primary metals. Second, employment increases in the recovering areas have been much greater in Dayton than in the state, as a whole. Table 1 shows percentage changes in employment during the recovery period for Ohio, Dayton, Cleveland and Youngstown-Warren. Dayton's recovery differs from the state's pattern in terms of the balance between durable and non-durable industry employment. The recovery in the transportation-equipment area has been so strong that 1985 employment levels were actually above employment for 1979. The figures presented for Cleveland and Youngstown-Warren reveal a very different picture.

Economic theory suggests a relationship between employment and wages, which the information in Table 2 lends some support to. The three metropolitan areas showing the greatest recovery from 1983 to 1985 are Columbus, Cincinnati and Dayton. All three had wage rates in manufacturing below the state average. In fact, Dayton is the only city that had below-Ohio-average earnings in all three sectors listed in the table.

The relatively low manufacturing wage level in Dayton represents a change. Previously, Dayton had a reputation as a high labor-cost area. In the early 1970s, wages in Dayton were almost 10 percent above the Ohio average. In addition, the productivity of labor was lower than for the state, resulting in relatively high labor costs in manufacturing. Average hourly earnings in manufacturing have moved back above the state average. For example, in August 1986 the average earnings figure for Dayton was $11.97 per hour, compared with $11.50 for the state. However, this still represents generally lower relative wages than were typical of Dayton's past.

Non-Manufacturing Employment Gains

All growth in employment in the Dayton-Springfield area can be attributed to the non-manufacturing sectors. Figure 3 illustrates the changes in the relative importance of various economic sectors on the profile of employment between 1970 and 1985. Services have become as significant as manufacturing; the retail and government areas are not far behind.

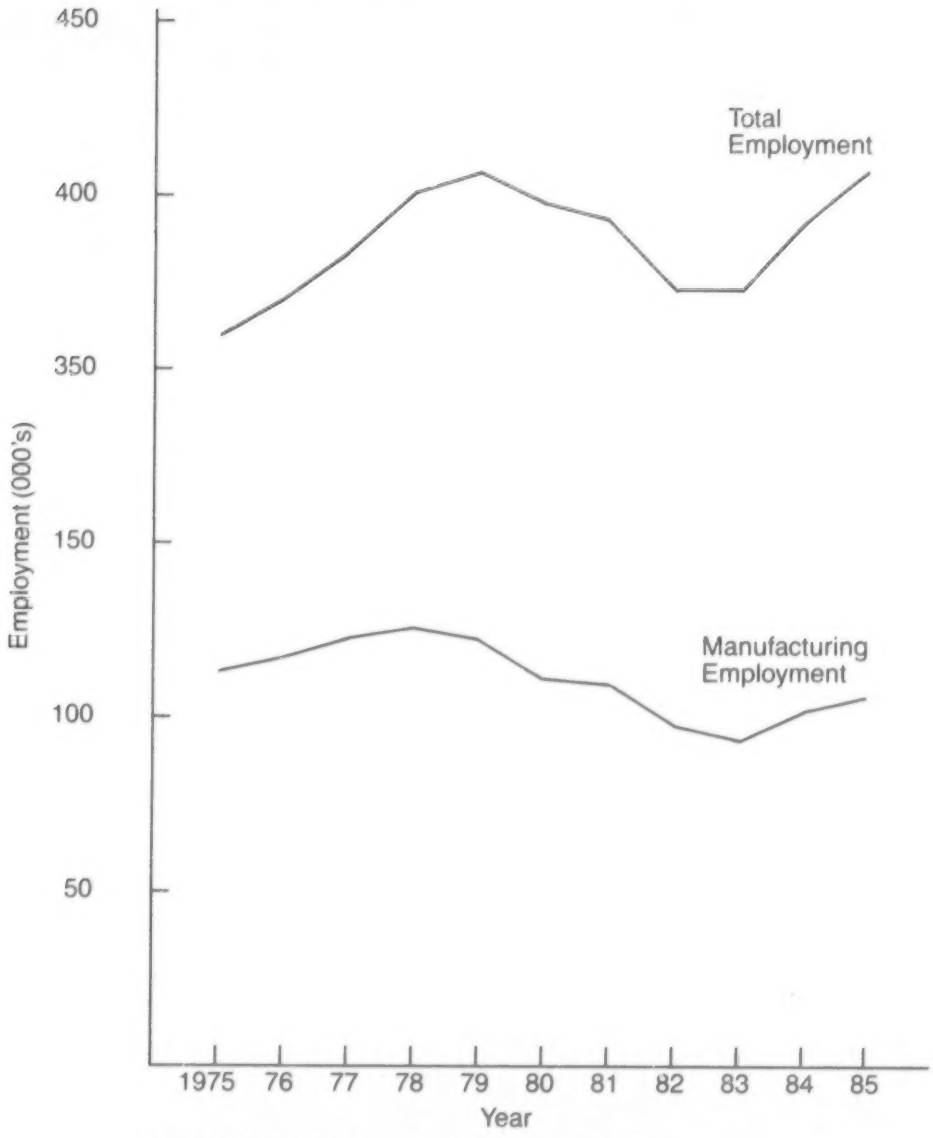
Government employment has always been important to the Dayton area. Government employment as a percentage of total employment is 17.6 percent in Dayton and 15.2 percent for Ohio. In the Dayton area, federal employment is much more important than in many other areas. Federal employment as a percentage of total government is 13.8 percent for the state as a whole, but 38.4 percent in Dayton-Springfield. Wright Patterson Air Force Base and the Defense Electronics Supply Center are the primary federal employers.

Table 2
Average Hourly Earnings, January 1983

	MANUFACTURING	WHOLESALE	RETAIL
Dayton	$10.16	$7.96	$5.25
Akron	10.21	7.50	5.82
Canton	10.56	8.22	5.27
Cincinnati	9.85	8.37	5.28
Cleveland	10.29	8.66	5.86
Columbus	9.62	7.98	5.41
Toledo	11.10	8.85	5.52
Youngstown-Warren	12.00	8.67	5.48
Ohio	10.30	8.28	5.38

Figure 1

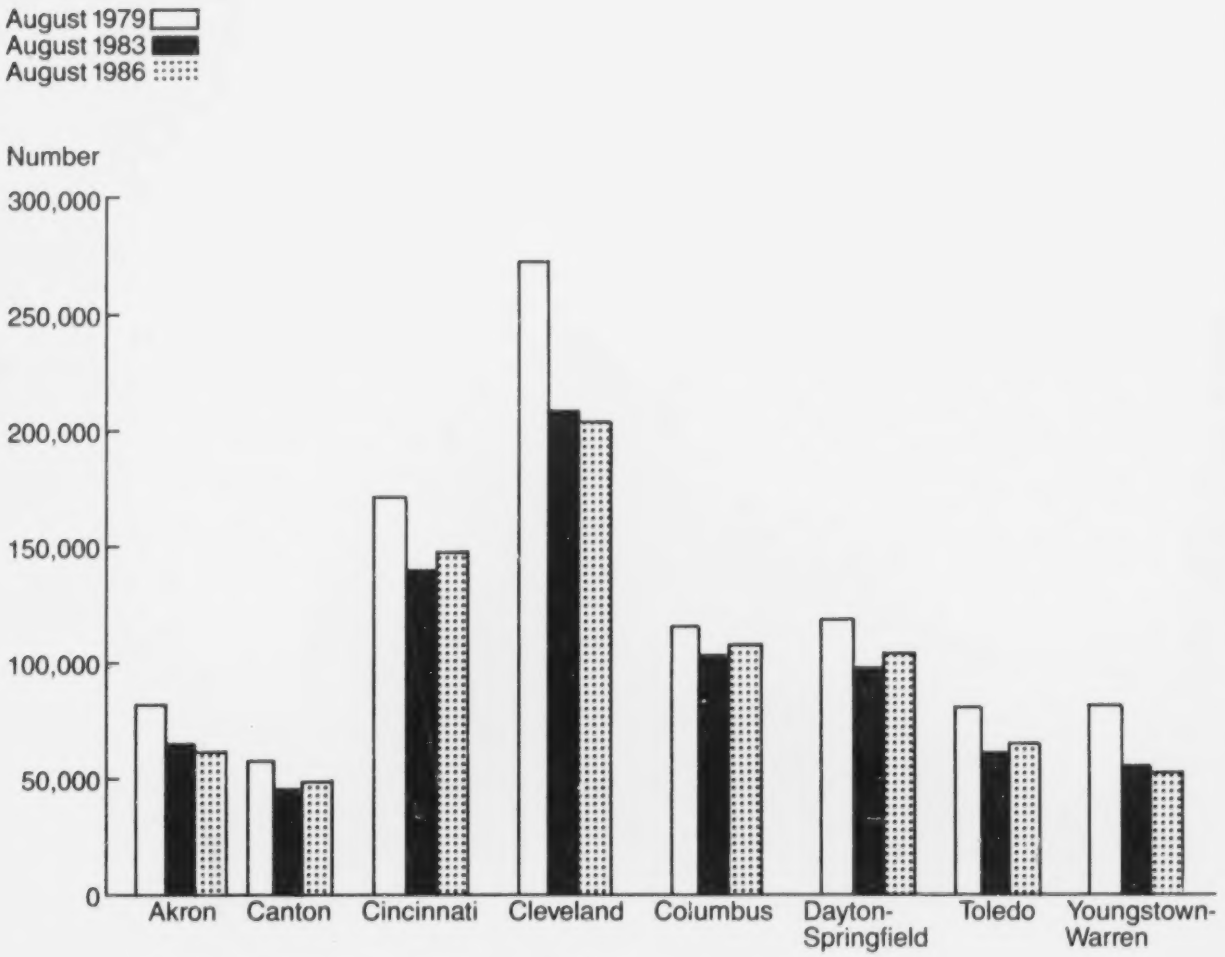
Dayton Area Employment



Source: Labor Market Information Division, Ohio Bureau of Employment Services

Figure 2

Manufacturing Employment in Metropolitan Areas



Source: *Labor Market Review, Ohio Bureau of Employment Services, August 1986.*

Figure 3

Dayton Employment, 1970 and 1985

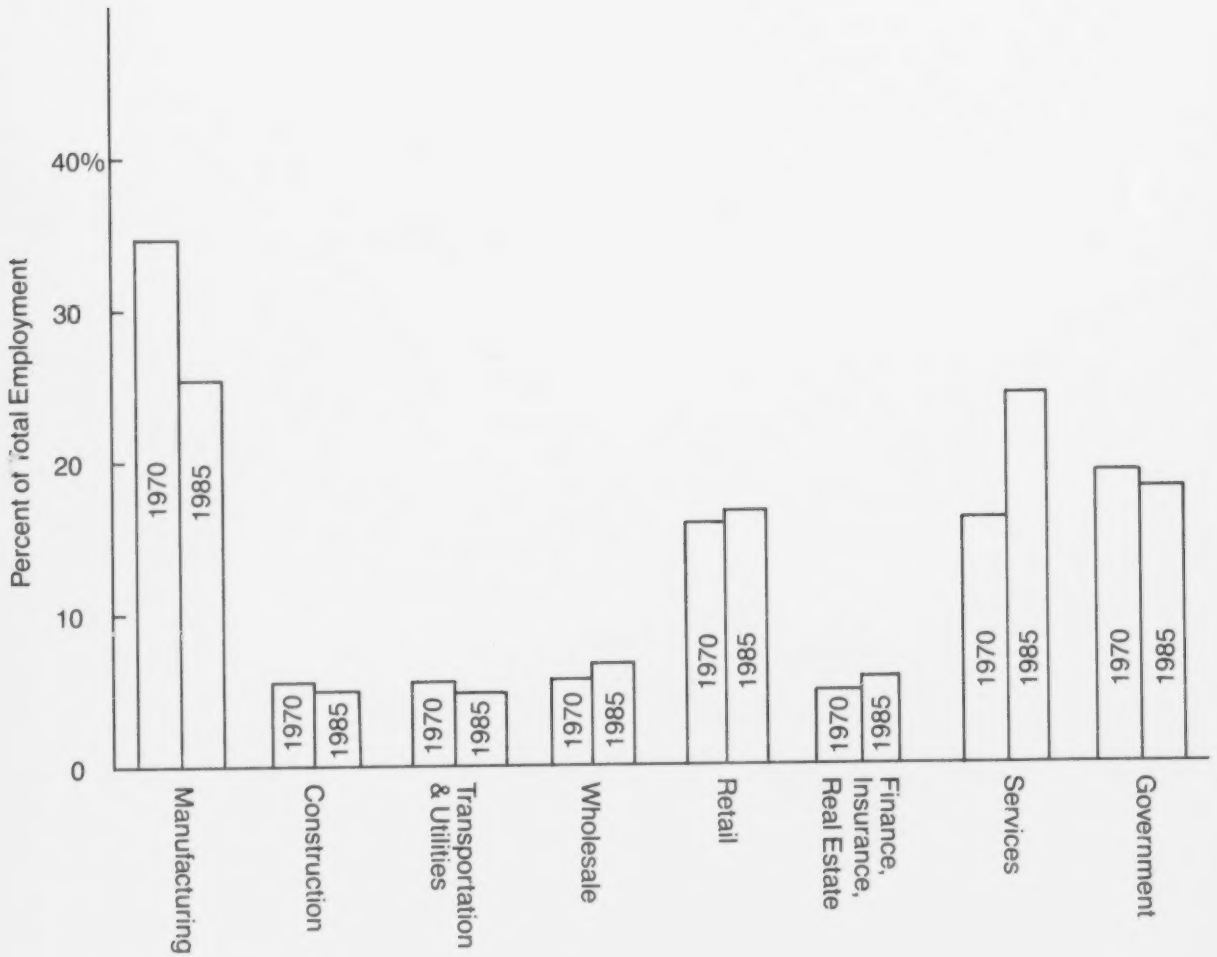


Table 3 shows changes in employment in the major non-manufacturing sectors from 1979 through 1985. The pattern of change in Dayton is similar to that for the state, as the table indicates. The exception is in wholesale trade, which showed considerably more growth in Dayton throughout the period. Wholesale trade and services appear to have been somewhat immune to the effects of the recession.

Total employment in the Dayton-Springfield area has surpassed previous highs. The change in the nature of employment has some interesting implications for the future. There has been a substitution of lower-paying service-sector jobs for higher-paying manufacturing jobs. In addition to differentials in salary, these new jobs tend to provide lower fringe benefits and are likely to involve a higher proportion of part-time employees. The lack of fringe benefits, especially medical benefits, has an impact on the community's health-service industry and the community's responsibility to provide medical care.

Table 3
Non-Manufacturing Employment, 1979–1985

	Dayton Employment 000's			Dayton % Change	Ohio % Change
	1979	1983	1985	1979-85	1979-85
Construction	15.8	10.6	13.6	– 13.9	– 15.9
Transportation and Public Utilities	16.3	13.9	14.5	– 11.0	– 12.9
Wholesale Trade	16.6	17.5	19.1	15.1	6.0
Retail Trade	68.4	63.1	71.1	4.0	6.3
Finance, Insurance and Real Estate	15.6	15.8	16.7	7.1	9.0
Services	79.5	84.7	94.5	18.9	18.2
Government	73.6	70.8	71.6	– 2.7	– 1.3

Source: Labor Market Information Division, Ohio Bureau of Employment Services

Table 4
Percentage Changes in Employment, August 1985 to August 1986

	Dayton	Ohio
Total	3.4	3.2
Manufacturing	– 2.0	– 1.9
Construction	14.6	5.8
Wholesale	4.2	3.1
Retail	6.3	5.8
Finance, Insurance and Real Estate	2.9	5.1
Services	7.8	7.5

Source: Labor Market Information Division, Ohio Bureau of Employment Services

Dayton's Future

A *scenario* for growth in the Dayton economy would include successes in several areas:

- Dayton would continue to benefit from its locational advantages in attracting wholesale activity and regional offices.
- There would be sufficient health in the local economy to maintain growth in retailing, services and the construction industry.
- A reasonable level of demand for transportation equipment would continue to offset declines in other manufacturing areas.
- The area would continue to enjoy success in attracting high technology, mostly defense-related companies.

It is probably impossible to underestimate the importance of Wright Patterson Air Force Base to the Dayton-Springfield economy. The base is the area's largest employer. In fact, with more than 33,000 employees and contract workers, it has the largest concentration of workers in one location of any employer in the state. The importance of Wright Patterson is not due simply to the numbers of employees it supports, but rather in its important role in research and development. The combination of defense expenditure growth under the Reagan administration and the increasing tendency of contractors to locate close to Wright Patterson has contributed to the growth of high-technology activity in Dayton. This growth is apparent in the development of the Miami Valley Research Park and the commercial construction along Interstate 675.

Defense is not the only reason for growth in high-technology activity in Dayton. There has been substantial growth in the information industry. Many of Dayton's traditional printing and publishing businesses have been enjoying success with new, technologically advanced services. These include Reynolds and Reynolds, Standard Register and Diconix. Mead Data Central has been enjoying rapid growth in its computerized-information-retrieval business.

The demand for transportation equipment, especially automobile related, is an important determinant of the health of the Dayton economy. General Motors is the important auto industry name in Dayton. The GM operations have a combined employment of approximately 23,000 workers. The Dayton-based GM plants have not been mentioned among the possible closings in the current discussion of cutbacks. However, some employment reductions are expected in all GM operations during the next few years. Ohio, Kentucky and Indiana have been selected for recent and future auto-production facilities. The Dayton transportation industry hopes to expand business with such companies as Honda.

The Dayton International Airport has been a source of employment increases during the past few years, primarily because of expansions by Piedmont Airlines, for which Dayton is a hub, and Emery Worldwide.

There has been a surge in retail activity during the past 18 months, both in terms of sales activity and the construction of additional space. The construction of new

shopping areas and additional suburban office space has been spurred by the completion of I-675, which connects I-75 and I-70 around the southeast portion of the Dayton area. Some of the retail activity represents a replacement of sales in older areas, including downtown. However, new activity is also represented.

As Table 4 indicates, construction in the Dayton-Springfield area from August 1985 to August 1986 was considerably above the state average. During 1985, much of the construction represented commercial expansion. Although 1986 non-residential construction is not likely to be as high as in 1985, residential construction is taking up some of the slack. During the first portion of 1986, residential construction showed a 30 percent increase over the same period in 1985.

Table 4 also indicates that Dayton continues to show expansion in wholesale trade, retail trade and services. As was the case for the state in general, Dayton experienced a decline in manufacturing employment for the period. The only exception to the decline in durable-goods manufacturing was in transportation equipment, which posted a gain of 1.4 percent in employment.

The Dayton economy has changed. Many of the traditional manufacturing employers are gone. The area continues to be dependent on the auto industry and defense-related high-technology activity. The future depends on success in continuing to enjoy expansion in the high-technology areas, as well as services and trade, to offset the continuing erosion in the traditional manufacturing areas.

Ohio Regional Forecasts for 1987

Economic conditions at the national level influence in part what happens with the local economy. As a backdrop for our annual regional forecasts, two Ohio economists present a brief outlook for the national economy in 1987.

The Canton Metropolitan Area

By Anthony H. Stocks,
Youngstown State University

Like many other durable-goods production centers in the Great Lakes Area, the Canton Metropolitan Area (comprised of Carroll and Stark counties) was hard-hit by the 1980-82 downturn in the U.S. economy. Manufacturing employment dropped by more than 20 percent during this period, and, unlike most recoveries for a business downturn, the 1983-86 expansion in the national economy has done very little to improve the job situation in Canton's manufacturing sectors. On the other hand, expansion in wholesale trade, retail trade and services has offset some of the employment losses in manufacturing. About 6,000 net non-manufacturing jobs have been created during the recovery. However, Canton continues to suffer from unemployment rates that are higher than those for the nation or Ohio.

What are the prospects for Canton in 1987? Slow growth in the national economy is expected to stagnate manufacturing sectors in the local economy and thus leave employment in durable and non-durable goods at about the same level as in 1986. While some job losses can be expected in construction and government in 1987, when compared with 1986, employment gains in trade and services should increase local employment by 1,000 to 2,000 jobs. Of course, this modest improvement in jobs will not help Canton lower its unemployment rate relative to that for the state or nation.

The Cincinnati Metropolitan Area

By Saul Pleeter and Ronald Duritsch,
University of Cincinnati

A number of events lead us to conclude that the year 1987 should prove to be a very interesting one in the Cincinnati area, especially for the manufacturing sector. On the plus side, the opening of the Toyota plant in Lourdes, Kentucky, although some 80 miles away, should provide some stimulus to the Cincinnati area economy. Orders for manufacturing goods that are indirectly and directly incorporated into these autos should be felt in 1987, and there is some evidence of firms locating in the area because of the new Toyota plant. The service sector also should experience some gain as a result of the jobs and payroll that will be injected into the area.

In addition, manufacturing facilities in the Cincinnati

The National Outlook

By Saul Pleeter and Ronald Duritsch,
University of Cincinnati

Nationally the economy marked its 50th consecutive month of economic expansion in January. Real Gross National Product (GNP) grew at a 2.8 percent annual rate for the third quarter of 1986 and will likely end the year with an annual growth rate of 2.5 percent. Although factors such as the new tax law, monetary policy, oil prices and the rate of inflation present areas of uncertainty in forecasting the national economy, the forecast for 1987 is expected to be basically more of the same as in 1986.

While government plans for a rise of only 2.6 percent in expenditures, compared with a forecasted increase of 9.5 percent in revenues, and both capital expenditures and construction are anticipated to decrease in 1987, consumer spending is forecasted to continue to support the economic expansion, although at a somewhat diminished rate. Retail sales increased about 6 percent in 1986, and this rate is projected to continue into 1987. Economic growth should be somewhat sluggish during the first half of 1987 and will pick up a bit during the second half as the decline in the value of the dollar results in increased demand for our manufacturing products by other countries. The trade deficit has persisted despite a substantial decline in the value of the dollar because foreign manufacturers have reduced profit margins. However, continued cuts in profit margins do not appear to be likely, and a smaller trade deficit coupled with improvements in manufacturing productivity should lead to a higher growth rate in the manufacturing sector.

area export their products, especially in the machine-tools and producer-durables sectors. The decline in the value of the dollar should boost these exports considerably, adding payroll and employment to the area. Also, Delta Air Lines undertook a significant expansion of its facilities in the Cincinnati area in 1986. Continued expansion of this facility is expected.

On the negative side, we must list the closing of the GM facilities in Norwood and Fairfield. Although the schedule for shutting these facilities calls for a 1988 initiation date, it is our belief that there will be reductions in employment starting with the summer of 1987. Although the initial cuts will be modest, more substantial cuts will be incorporated in the 1988 forecasts. U.S. Playing Card also has announced that it will close part of its Norwood operations and relocate about 200 jobs. At this time there is no indication as to whether these jobs will be relocated within or outside the metropolitan area.

Incorporating both national and local conditions into our forecasts, we anticipate that 1987 should be a year of continued growth for the Cincinnati metropolitan area. Gross Regional Product (GRP), a measure of the total value of goods and services produced in the region, increased by 3.95 percent in 1986 and is forecast to grow by 3.0 percent in 1987. The 1986 growth rate was substantially higher than the national rate and the forecasted 3 percent growth rate for 1987 is also higher than the forecast for the nation. Employment increased by 2.2 percent last year, a rate that exceeded the national rate. Commensurate with the growth in GRP, a 2.0 percent increase in employment is expected in 1987. Employment in services continues to be the most rapidly increasing sector, but manufacturing employment is also projected to increase.

'Incorporating both national and local conditions into our forecasts, we anticipate that 1987 should be a year of continued growth for the Cincinnati metropolitan area.'

Unemployment, now less than the national rate, is projected to decrease slightly to 6.7 percent. Prices, after increasing only 0.92 percent last year, will increase at a 3.3 percent rate in 1987. Finally, real personal income will grow by 3.9 percent in 1987 following a 5.9 percent increase in 1986.

In sum, the forecasts call for continued expansion in the Cincinnati area at a rate slightly higher than those projected for the nation.

The Cleveland Metropolitan Area

By Barbara Sherman Rolleston, Baldwin-Wallace College

For the Cleveland area, 1986 marked the third consecutive year of overall employment growth, with total employment increasing by 14,358 (1.65 percent).* Like the national economy, however, employment growth continued to slow relative to its peak growth rate in 1984. As a reflection of changing demographic trends and the local industrial structure, Cleveland employment still falls short of its pre-1980 level (96 percent), while national employment exceeds its pre-1980 level by 11 percent.

As in 1985, and as in the United States as a whole, Cleveland's 1986 employment growth was concentrated entirely in the non-manufacturing sector, which increased by 3.1 percent. All non-manufacturing sectors, except trade, experienced faster growth in 1986 than in 1985, with the largest increase occurring in selected services (5.2 percent). Selected services and transportation were the only non-manufacturing sectors to grow faster than the national average in 1986. Nevertheless, overall non-manufacturing employment increased faster in the Cleveland area than the national rate of 2.7 percent.

In the manufacturing sector, 88 percent of the total employment loss of 5,700 jobs occurred in durable-goods industries. While job losses occurred in all five major durable-goods sectors, they were concentrated in non-electrical machinery, which accounted for 40 percent of the employment loss. However, the severe weakness in this sector is more a reflection of national than local economic conditions, given the serious problem of import competition in the machine tool industry. Indeed, 53 percent of national employment losses in durable-goods industries was also concentrated in the non-electrical machinery sector.

In non-durable-goods manufacturing, local employment continued to fall, with the largest losses occurring in paper products (4.17 percent). Only food and rubber products showed employment increases in 1986, with the food sector growing faster than the national average. Overall, while manufacturing employment decreased both locally and nationally, national losses were concentrated in the durable-goods sector, and at the same time Cleveland continued to experience job losses in both the durable- and non-durable-goods sectors.

The Cleveland unemployment rate fell for the third consecutive year in 1986, to its lowest level (7.7 percent) since 1980. This drop is particularly significant since it was the result of a decrease in the number of unemployed persons, as well as an increase in the size of the labor force. The local labor force increased by 7,800 persons in

**1986 averages are based on data for the first three quarters of 1986.*

"Cleveland will continue to benefit from the growth of small businesses and a broader recognition of its strong institutional support for entrepreneurial ventures."

1986 — the first increase since 1980. The Cleveland area's capacity during the past year to absorb an increasing number of persons looking for work speaks well for the local economy's underlying strength.

Most economists predict that the national economy will continue to grow in 1987, but, as in 1986, at a sluggish pace of less than 3 percent. Once again, hopes are pinned on the foreign trade sector, where the decline in the value of the dollar against other major currencies is expected to produce a long awaited increase in export demand, as well as a reduction in imports. Less confidence exists in the strength of the consumer and business-investment sectors where, in both cases, tax-reform-induced spending increases in late 1986 may have sapped potential spending in 1987. Ample industrial capacity and still-high vacancy rates in non-residential and multifamily buildings may also dampen growth in investment spending.

Local economic conditions in 1987 will continue to be strongly influenced by these national economic events. The continued weakness in the U.S. steel industry and expected declines in auto sales should depress employment in local primary metals and transportation equipment sectors. These declines may be offset, however, by an improvement in non-electrical machinery employment, due to recently imposed restrictions on Japanese exports of machine tools to the United States. While the benefits of these restrictions may not be felt until mid-1987, they are likely to stem the severe decline in local non-electrical machinery employment that occurred in 1986.

Non-manufacturing employment — particularly in trade, finance, insurance and real estate, and selected services — should continue to increase in 1987, causing overall employment to continue to expand. Cleveland will continue to benefit from the growth of small businesses and a broader recognition of its strong institutional support for entrepreneurial ventures. Recent activities at the core of the Cleveland metropolitan area — including the waterfront development project and the Tower City and Erieview Plaza Galleria construction projects, as well as Cleveland's capture of the Rock and Roll Hall of Fame — create strong potential for employment growth throughout the region and bode well for the area's longer-term economic prospects.

The Columbus Metropolitan Area

By Henry L. Hunker,
The Ohio State University

According to national estimates, the Columbus Metropolitan Statistical Area (MSA)* ranked tenth in employment growth among 250 U.S. metropolitan areas between September 1985 and September 1986. With an increase of 35,800 employees, or a 5.8 percent gain, the area's rate exceeded that of most of the nation's larger metropolitan areas, including many of those in the so-called Sun Belt. The Columbus MSA then had the largest rate of employment growth of any Ohio MSA and, directly related, one of the lowest rates of unemployment in the state. Franklin County, with more than 80 percent of all employment in the MSA, had an unemployment rate in late 1986 of only 4.9 percent, compared with a state average of 7.3 percent. This was the second lowest rate in Ohio. Delaware County had a 4.6 percent rate, the lowest in Ohio, a distinction shared with Hancock County in Northwestern Ohio. To a considerable extent, the Columbus MSA has weathered national recessions quite well, in large part because of the diversity of its economy.

This fact is reflected in the composition of the Columbus MSA labor force, one distinctively different from the state's other major metropolitan areas. The pattern of employment change in the MSA continues to reflect trends established over the past six years or so. Manufacturing employment in the mid-1980s has shown very modest expansion in total, but, overall, a 10.2 percent loss has occurred since 1979. Currently, just under 17 percent of the labor force is employed in the manufacturing sector. Jobs in construction and in transportation and utilities also have declined in this period, not inconsistent with national trends in general. In contrast, the Columbus MSA continues to exhibit strong growth in the economy's broad tertiary (or service) sector, particularly in general services, wholesale and retail trade, and in finance, insurance and real estate. These and other service activities are expected to be the major sources of employment growth. Here, again, the Columbus MSA economy tends to reflect national trends rather than trends more characteristic of Ohio and the state's other MSAs.

Despite similarities within the MSA, it would be a mistake to suggest that there are no differences. Clearly, consistent with national data, manufacturing and construction continue to employ a larger *share* of the labor force in the MSA's suburban counties than in Columbus/Franklin County. In general, 25 to 35 percent of the labor force in the suburban counties are employed in manufacturing. But, in Union County, where the large and expanding Honda automobile plant is located, well over

**The Columbus MSA is a seven-county area including Franklin, Delaware, Fairfield, Licking, Madison, Pickaway and Union counties.*

50 percent of the labor force is so employed. To some extent, however, gains in new manufacturing employment in suburban counties have been offset by losses in older segments of the region's manufacturing economy. Columbus/Franklin County generally has a larger share of its labor force in all services than do the suburban counties, but this is especially so in government, professional and personal services, and finance, insurance and real estate.

New construction in the region reflects these conditions and the expanding role of the service economy; new office buildings, hotels, and warehouse and distribution facilities are under construction both in the urban core and in suburban areas, often adjacent to the Outerbelt (Interstate 270). Examples include The Limited, one of the largest retailing organizations in the nation, with its headquarters and major distribution facilities in suburban Columbus. Further expansion of its distribution center and the addition of a credit-card processing operation promise to add 1,500 or more new jobs by 1989. In the core area, the Capitol South project is slowly taking shape with a focus on an urban retail mall, and on the northern edge of the downtown two new high-rise structures will add 3-million square feet of office space. These two facilities — an addition to the Nationwide Insurance complex and the state's new 31-story building for the Bureau of Workmen's Compensation — are further evidence of expansion in the service economy. Thus, despite modest changes in the manufacturing sector, it is service-oriented business that accounts for much of the expansion both in the Columbus urban core and in the MSA's suburbia.

The Toledo Metropolitan Area

By Michael Magura,
University of Toledo

Employment in the Toledo MSA increased approximately 2 percent during 1986 over that of 1985. The increases occurred in the non-manufacturing industries, in particular, in the service and wholesale and retail trade industries. Manufacturing industries, on balance, showed a decline in employment during 1986. The unemployment rate in the Toledo MSA stood slightly above 8.5 percent. This rate represents an increase over that of 1985 and remains above the national average. For the year as a whole, the economic situation for Toledo was rather stagnant. The outlook for 1987 offers a similar scenario.

It is anticipated that the 1986 employment decline in the manufacturing sector will continue during 1987. More specifically, declines are expected in the auto-related industries. This is due to the slackening pace in auto production anticipated for 1987 because of the increased consumer purchases of cars in 1986 in response to low finance rates and tax law changes. Employment in other durable and non-durable manufacturing industries is not expected to change appreciably. The only bright spot again appears to be in the non-manufacturing sector. As in 1986, employment in the service and wholesale and retail trade areas will move ahead slightly. However, construction employment is expected to decline due to an expected uptick in interest rates during 1987.

On balance, overall employment and the associated level of economic activity in the Toledo MSA are not seen as improving significantly during 1987. Growth in employment during 1987 is anticipated to be in the range of 1 to 1.5 percent.

The Youngstown-Warren Metropolitan Area

By Anthony H. Stocks,
Youngstown State University

As expected, 1986 proved to be a lackluster year for manufacturing sectors in the local economy. Except for transportation equipment, quarterly employment in durable-goods sectors was lower in 1986 than 1985 and was virtually identical in non-durable goods. Contributing to this weak performance was a poorer-than-anticipated growth rate in the country's GNP and a failure of exports and imports to respond quickly to the relative decline of the dollar against major international currencies. Clearly, these events hurt the local manufacturing sectors in terms of their domestic and foreign markets. On the other hand, construction, retail trade and services all posted gains in jobs for 1986 that exceeded last year's forecast. Indeed, the increase in non-manufacturing jobs led to a growth in total employment of between 3,000 and 6,000 over the comparable quarters of 1985. In turn, this increase in jobs, coupled with outmigration, lowered the local official unemployment rate below double digits by the end of 1986.

What are the prospects for 1987? Loss of the federal investment tax credit and less generous depreciation schedules are expected to have a dulling effect on capital-goods producers, especially in light of the considerable excess capacity in many industrial sectors. Thus, the machinery and fabricated metals sectors will likely experience a continued decline in jobs in 1987. Similarly, the automobile industry seems to suffer from excess capacity with growing international competition for a domestic market that is not experiencing significant growth. Moreover, these problems will be compounded by the expected slow growth in real national products estimated at 2 to 3 percent in 1987. To be sure, wholesale trade, retail trade, finance, insurance and real estate, and services are expected to produce added jobs in 1987. But construction and government are forecast to experience less employment than in 1986. Thus, with fewer manufacturing jobs and a slowdown in non-manufacturing, the prospects are for virtually no growth in local employment in 1987.

Employment Forecasts for 1987

By James P. Lesage,
Bowling Green State University
and
Michael Magura,
University of Toledo

A set of employment forecasts for all eight metropolitan areas in Ohio for the last quarter of 1986 and the four quarters of 1987 are presented here. The forecasts are for three categories of employment: durable manufacturing, non-durable manufacturing and non-manufacturing employment. The forecasts of these three categories are added to provide forecasts of total employment for each of the eight Ohio SMSAs.

This employment forecasting model will replace the leading indicator model that appeared in previous editions of the *Ohio Economic Trends Review.* The data sources for the leading indicators associated with the previous model are no longer available. For readers interested in leading indicators for the eight Ohio metropolitan areas, the Ohio Bureau of Employment Services/Labor Market Information Division will begin regular publication of this type of information this year. Composite leading indicator indexes for each of the eight metropolitan areas will be provided.

The model that produced these forecasts is an econometric model. The model was produced by examining alternative specifications and types of models, with the final econometric relations derived from those specifications that yielded the best forecast during a test period. Four econometric modeling techniques were tested using out-of-sample forecasts over the period 1983 first quarter through 1985 third quarter. The forecasts were generated quarterly, as if the model were being used in practice. This consisted of estimating the model with data up to the hypothetical present, then producing a four-quarter forecast into the future (beyond the hypothetical present). The model was then updated with data for the next quarter, re-estimated, and another four-quarter forecast produced. This process was continued from 1983 first quarter until the third quarter 1985, when the four-quarter forecast extended to the end of the sample data, which was the third quarter of 1986. This resulted in a total of 11 four-quarter ahead forecasts during the test period, four such forecasts during 1983 and 1984, and three forecasts during 1985.

The four econometric modeling techniques tested were:

1. an autoregressive model (AR)
2. a fixed lag length vector autoregressive model (FVAR)
3. a Bayesian vector autoregressive model (BVAR)
4. a variable lag length vector autoregressive model (VVAR)

Each of the four models was specified, estimated and simulated using the procedure described above for the period 1983 first quarter through 1985 third quarter. The models where estimated with quarterly data that began in 1970 first quarter. The econometric technique that yielded the smallest root-mean-squared error for each metropolitan area was employed to produce the five-quarter ahead forecast for 1986 fourth quarter, and the four quarters of 1987.

The average percentage root-mean-squared errors (RMSE) for each step of the four-quarter ahead forecast are shown in Table 1. The average step-1 percentage RMSE in Table 1 represents the average of the 11 one-step ahead forecasts over the test period, and similarly for the step-2, step-3, and step-4 errors. The average percentage RMSE in the table reflects the average over the four steps. This should allow the reader to assess the degree of confidence about the forecasts for 1987. The accuracy of the models vary considerably across the eight metropolitan areas.

The best historical forecasts during the test period were for Cleveland and Columbus, with average percentage RMSE close to 1 percent. The worst forecasts were for Toledo, with average errors between 3 and 4 percent; Canton non-durable manufacturing employment exhibited the worst average error at 4.4 percent. It should be noted that the total employment forecasts for the metropolitan areas should exhibit slightly smaller errors since some of the positive and negative errors will cancel during the process of adding up the three employment categories to obtain the total employment forecast.

The set of eight figures accompanying this section show forecasts for the fourth quarter of 1986 and the four quarters of 1987. To put the forecasts into perspective, they are plotted along with historical values for quarterly employment extending back to 1982. The last column of data for each set of figures shows the percentage change for the forecasted total employment from employment levels one year ago. By referencing on employment during the same quarter of the previous year, we abstract from seasonal variation in employment levels. This allows us to spot the employment trends more easily. A consistent trend of slowing employment growth, or slight declines in employment, begins to show in late 1987. The only exception to this pattern is Columbus. It should be cautioned here that very few negative percentage changes are present during late 1987, indicating that although the rate

of growth in employment is slowing relative to 1986, there is still overall employment growth forecasted. In this regard it also should be noted that 1986 was a very good year, so that a slowdown relative to 1986 should probably be expected.

Reading the Figures

The following figures show employment trends for durable manufacturing, non-durable manufacturing, non-manufacturing and total employment for each of the eight major metropolitan areas in Ohio. The graphs in these figures are indexed to the first quarter of base year 1982. The employment index is shown along the y-axis; the year and quarter are shown along the x-axis.

In the graphs, historical employment data are shown for the first quarter of 1982 through the third quarter of 1986 . Forecasts for employment cover the period from the fourth quarter of 1986 to the fourth quarter of 1987; the line in the shaded area indicates the forecast.

Each quarter's employment is expressed as the percentage change from the base quarter, 1982:1. To determine the percent change in employment from one period to another, subtract the y-axis coordinate for the latter period from the y-axis coordinate for the earlier period. The remainder is the percent change in durable employment between the two periods. For example, the index of manufacturing employment in Akron's 1986:3 quarter was 97, which means there was a 3 percent decrease in manufacturing employment between 1982:1 and 1986:3.

Appendix

Table 1: Forecast Errors Over Test Period, 1984Q1 – 1986Q3

	Akron (BVAR model)		
	Durable	Non-Durable	Non-Manufacturing
step-1 percent RMSE	2.2	1.4	1.7
step-2 percent RMSE	2.8	2.4	2.0
step-3 percent RMSE	2.0	1.7	1.8
step-4 percent RMSE	2.7	1.8	0.7
average percent RMSE	2.4	1.8	1.5

	Canton (AR model)		
	Durable	Non-Durable	Non-Manufacturing
step-1 percent RMSE	1.8	4.3	2.1
step-2 percent RMSE	2.4	4.4	2.7
step-3 percent RMSE	1.8	4.4	2.2
step-4 percent RMSE	2.2	4.3	1.7
average percent RMSE	2.1	4.4	2.2

	Cincinnati (FVAR model)		
	Durable	Non-Durable	Non-Manufacturing
step-1 percent RMSE	1.4	1.1	1.2
step-2 percent RMSE	1.1	0.8	2.0
step-3 percent RMSE	1.0	1.5	1.6
step-4 percent RMSE	1.5	0.9	1.5
average percent RMSE	1.2	1.1	1.6

	Cleveland (BVAR model)		
	Durable	Non-Durable	Non-Manufacturing
step-1 percent RMSE	1.1	1.2	1.0
step-2 percent RMSE	1.7	1.3	0.9
step-3 percent RMSE	1.1	1.2	1.4
step-4 percent RMSE	0.8	1.2	0.8
average percent RMSE	1.1	1.2	1.0

	Columbus (BVAR model)		
	Durable	Non-Durable	Non-Manufacturing
step-1 percent RMSE	0.7	1.6	1.0
step-2 percent RMSE	0.4	1.2	1.2
step-3 percent RMSE	0.5	1.1	0.6
step-4 percent RMSE	0.7	1.3	0.8
average percent RMSE	0.6	1.3	0.9

	Dayton (AR model)		
	Durable	Non-Durable	Non-Manufacturing
step-1 percent RMSE	1.5	2.2	1.3
step-2 percent RMSE	1.6	1.6	1.4
step-3 percent RMSE	1.1	1.6	1.8
step-4 percent RMSE	0.9	2.2	1.6
average percent RMSE	1.3	1.9	1.5

	Toledo (FVAR model)		
	Durable	Non-Durable	Non-Manufacturing
step-1 percent RMSE	2.1	2.8	4.4
step-2 percent RMSE	2.5	2.9	4.0
step-3 percent RMSE	2.2	3.3	3.8
step-4 percent RMSE	2.4	4.1	3.4
average percent RMSE	2.3	3.3	3.9

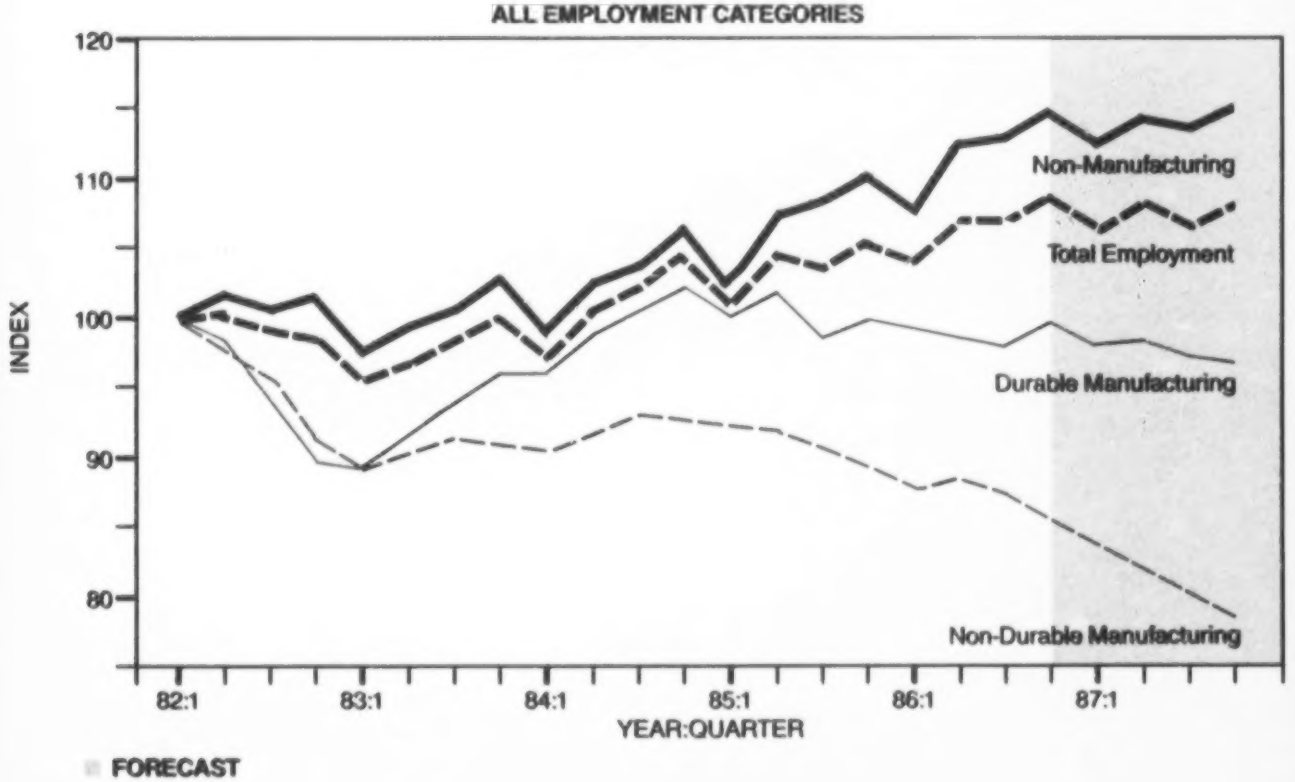
	Youngstown (AR model)		
	Durable	Non-Durable	Non-Manufacturing
step-1 percent RMSE	2.6	2.1	2.1
step-2 percent RMSE	2.3	1.9	2.9
step-3 percent RMSE	1.5	2.9	1.7
step-4 percent RMSE	2.1	2.8	2.6
average percent RMSE	2.1	2.4	2.3

AKRON:

Employment Forecast for 1987

(Table in thousands)

Date	Durable Manufacturing	Non-Durable Manufacturing	Non-Manufacturing	Total Employment	Percent Change Over a Year Ago
85-1	35.33	32.9	183.66	251.93	
85-2	35.80	32.9	189.83	258.53	
85-3	34.96	32.4	191.66	259.10	
85-4	35.30	31.7	196.80	263.80	
86-1	35.16	31.3	192.50	259.00	
86-2	34.83	31.6	200.40	266.90	
86-3	34.26	31.2	201.53	267.03	
forecast starts here					
86-4	35.05	30.2	204.44	269.76	2.25
87-1	34.43	29.4	198.96	262.83	1.47
87-2	34.56	28.7	204.55	267.85	0.35
87-3	34.07	28.2	203.78	266.06	-0.37
87-4	33.89	27.8	206.77	268.48	-0.47



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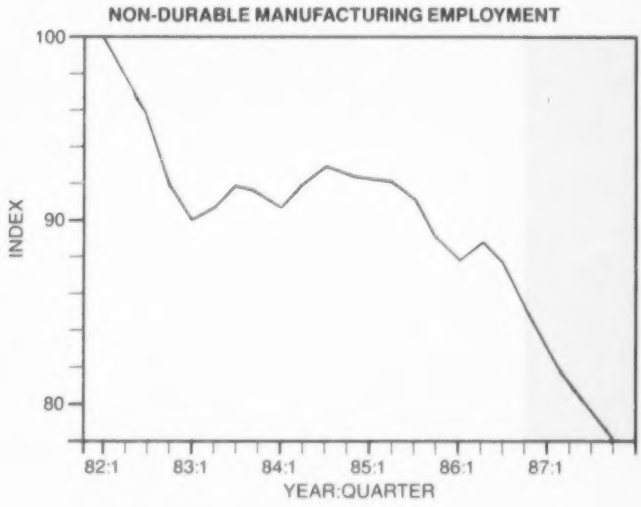
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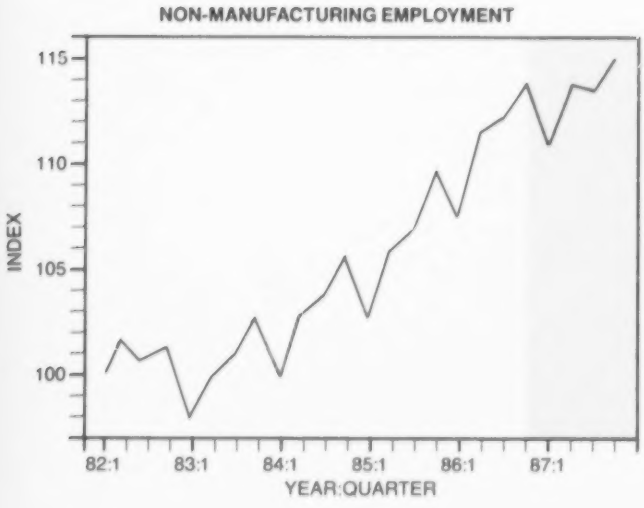
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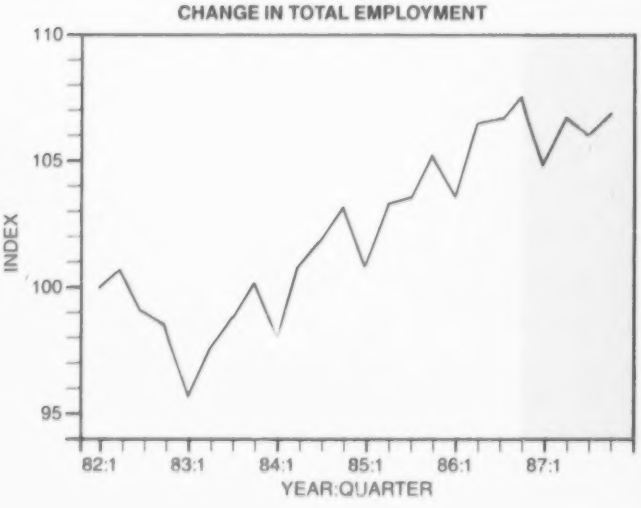
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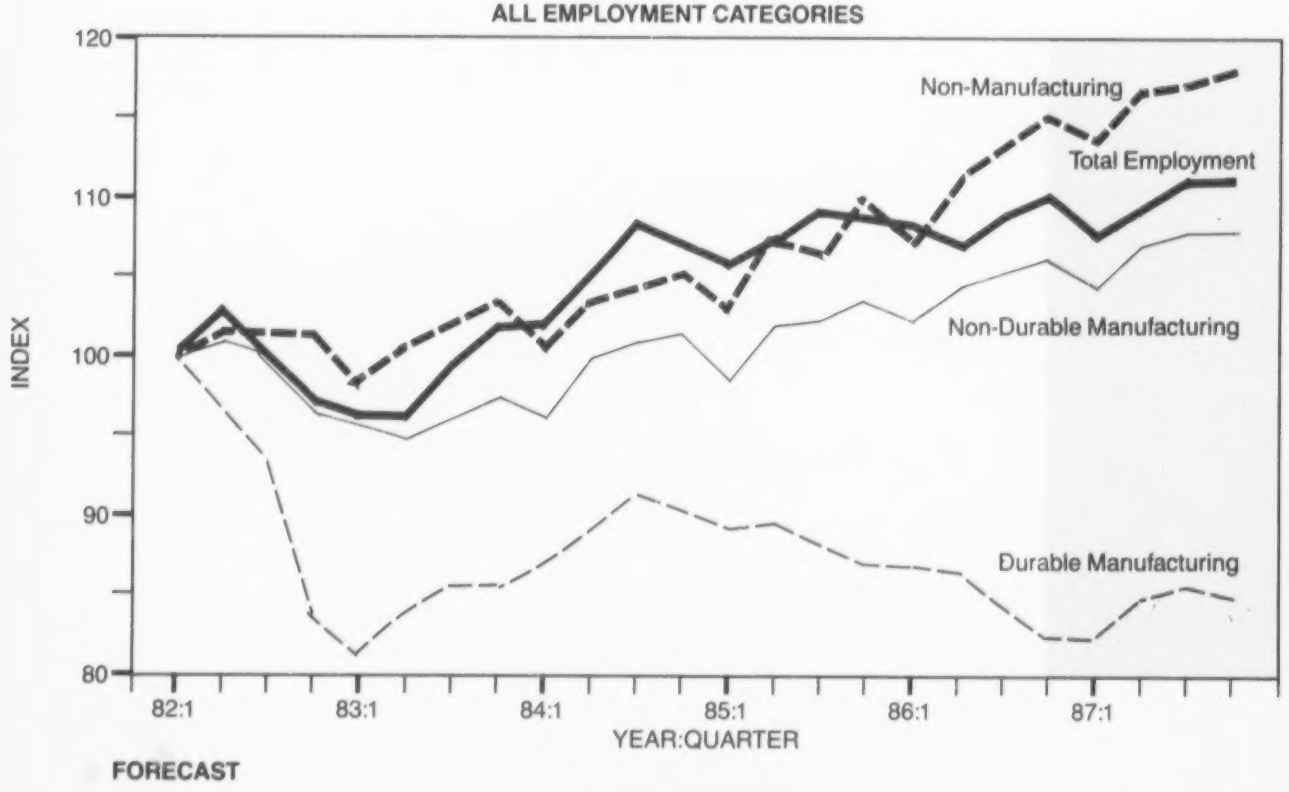
FORECAST

CANTON:

Employment Forecast for 1987

(Table in thousands)

Date	Durable Manufacturing	Non-Durable Manufacturing	Non-Manufacturing	Total Employment	Percent Change Over a Year Ago
85-1	34.90	11.3	101.50	147.70	
85-2	35.10	11.5	105.93	152.53	
85-3	34.63	11.7	106.93	153.33	
85-4	34.23	11.7	109.16	155.13	
86-1	34.13	11.7	106.90	152.73	
86-2	33.93	11.5	111.76	157.23	
86-3	33.23	11.7	112.96	157.96	
forecast starts here					
86-4	32.52	11.8	114.13	158.47	2.15
87-1	32.45	11.4	111.62	155.56	1.85
87-2	33.20	11.6	115.30	160.17	1.86
87-3	33.53	11.8	115.74	161.14	2.01
87-4	33.12	11.8	116.24	161.26	1.76



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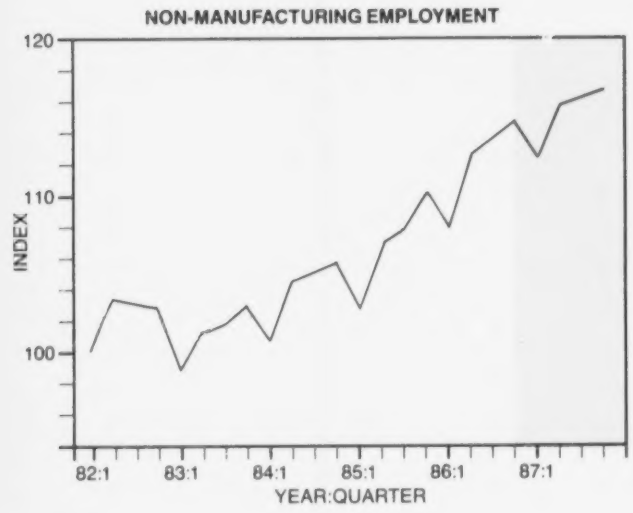
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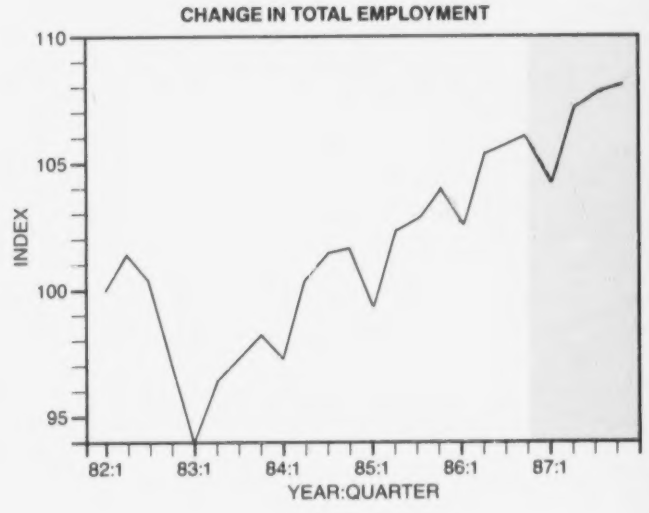
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YEAR:QUARTER

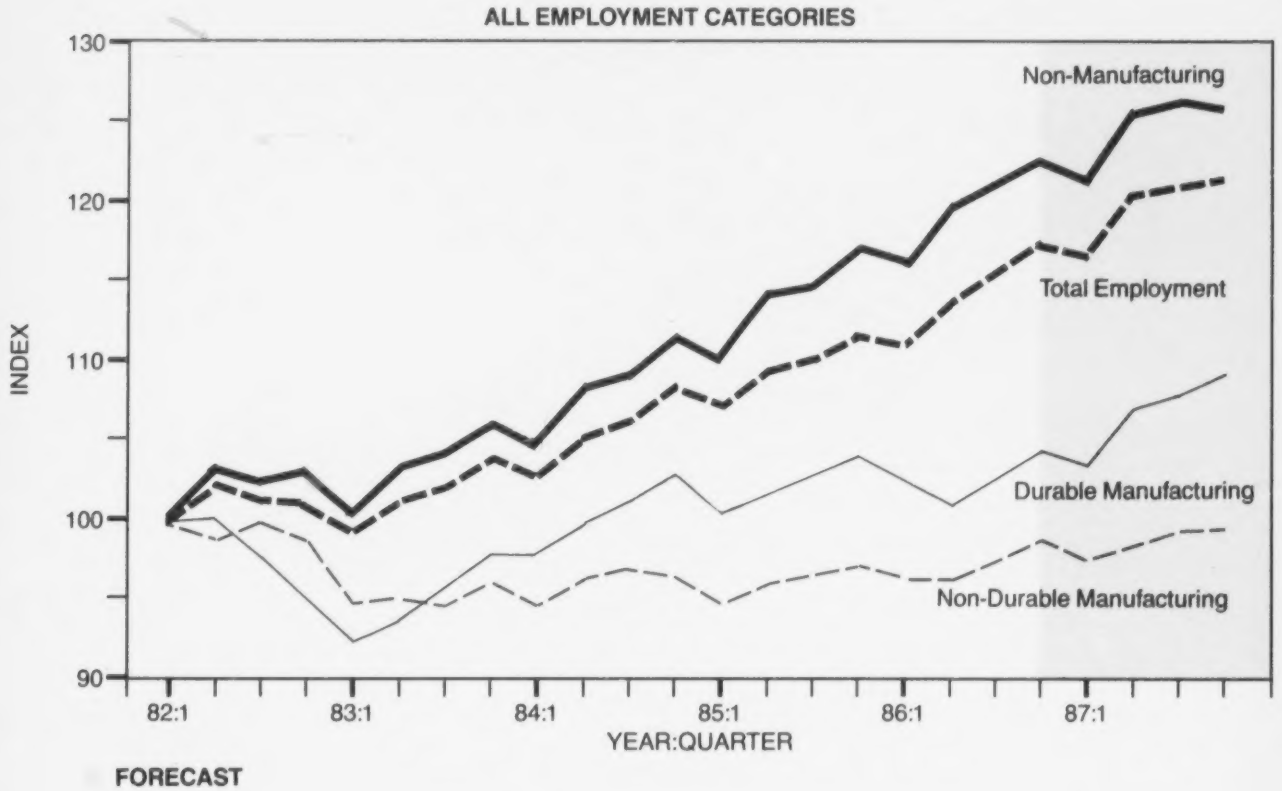
FORECAST

CINCINNATI:

Employment Forecast for 1987

(Table in thousands)

Date	Durable Manufacturing	Non-Durable Manufacturing	Non-Manufacturing	Total Employment	Percent Change Over a Year Ago
85-1	81.60	63.0	463.06	607.66	
85-2	82.80	64.0	481.90	628.76	
85-3	83.60	64.5	485.46	633.63	
85-4	84.30	64.8	493.46	642.63	
86-1	83.36	64.6	486.93	634.93	
86-2	81.83	64.6	506.43	652.86	
86-3	83.33	65.4	511.66	660.40	
forecast starts here					
86-4	84.67	65.9	518.50	669.17	4.12
87-1	84.11	64.7	511.73	660.57	4.03
87-2	86.52	65.4	528.89	680.83	4.28
87-3	87.01	66.2	531.85	685.10	3.74
87-4	88.30	66.2	531.91	686.44	2.58



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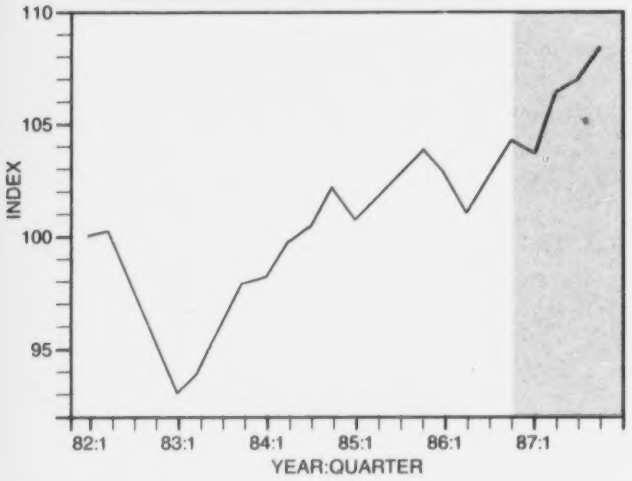

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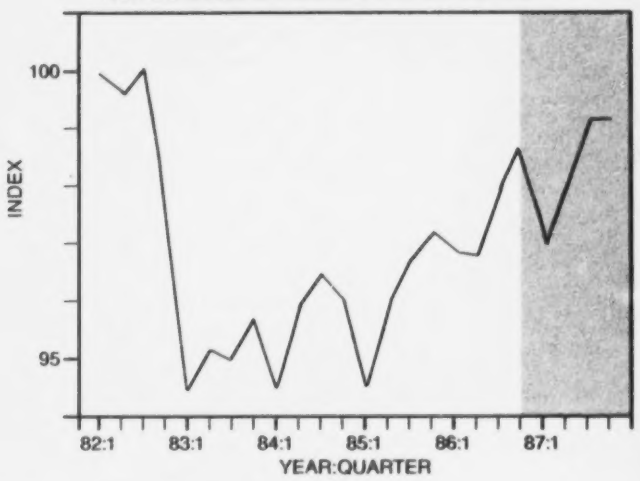

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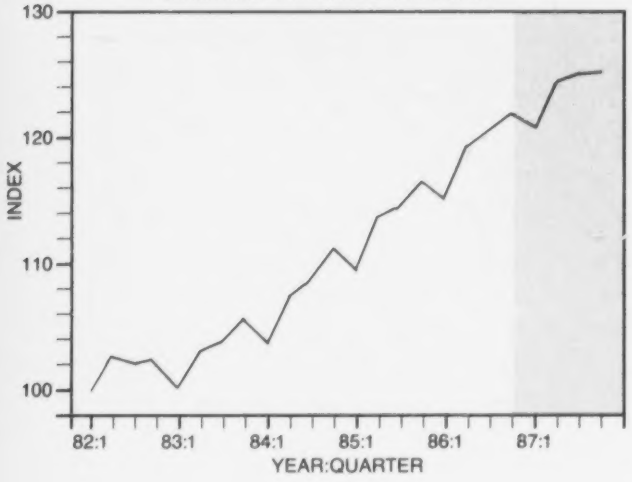
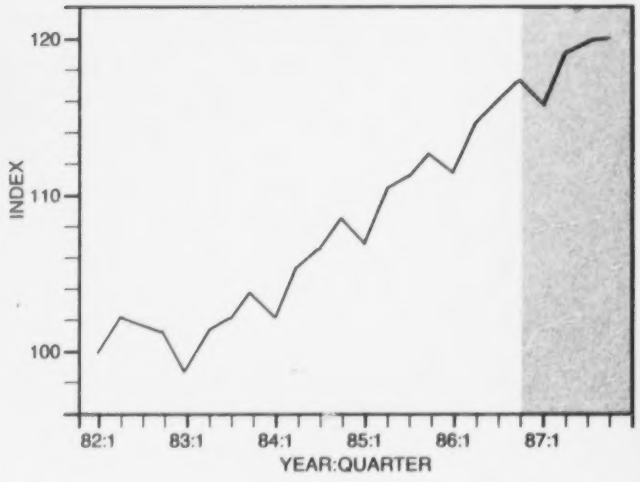


CHANGE IN TOTAL EMPLOYMENT



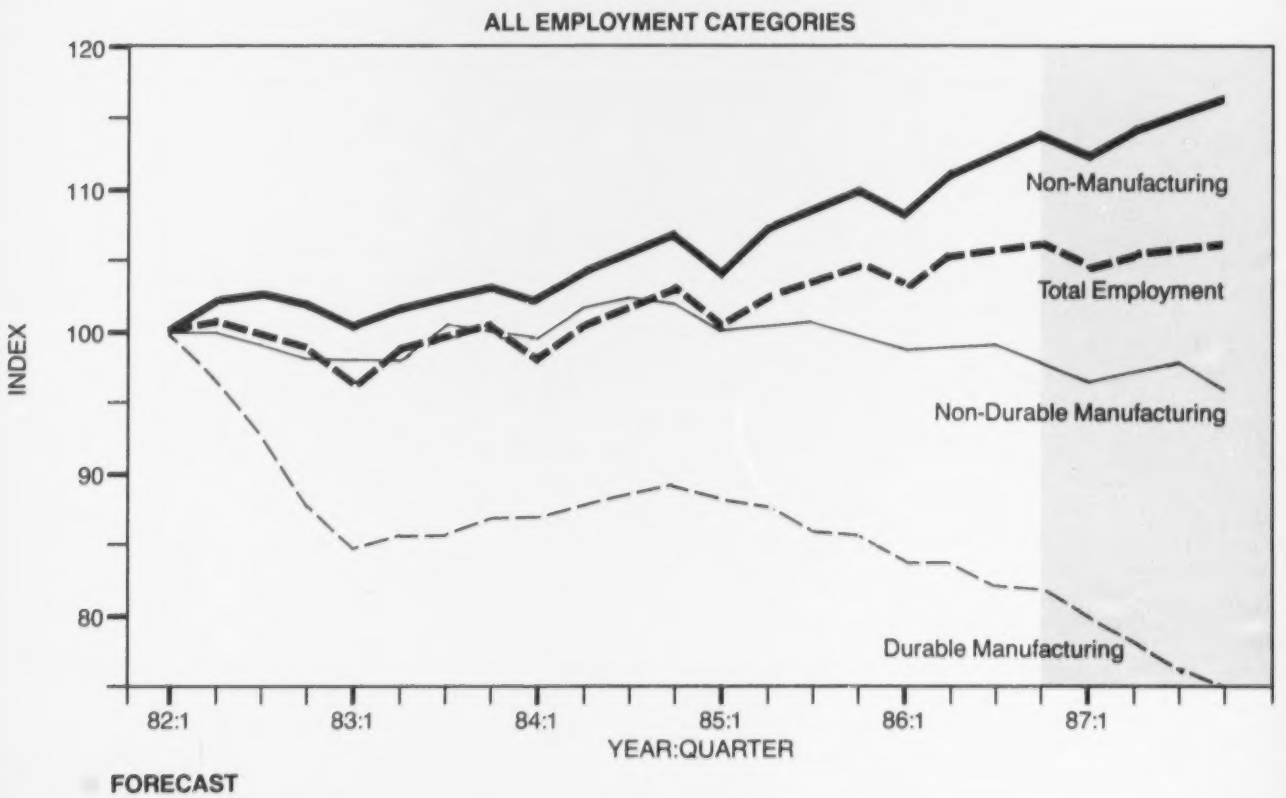
FORECAST

CLEVELAND:

Employment Forecast for 1987

(Table in thousands)

Date	Durable Manufacturing	Non-Durable Manufacturing	Non-Manufacturing	Total Employment	Percent Change Over a Year Ago
85-1	147.8	64.6	635.83	838.23	
85-2	147.1	64.8	657.80	869.70	
85-3	144.8	64.8	667.26	876.86	
85-4	144.4	64.2	673.80	882.40	
86-1	142.0	63.8	661.30	867.10	
86-2	141.8	63.9	683.40	889.10	
86-3	139.2	63.9	691.40	894.50	
forecast starts here					
86-4	138.1	62.9	696.84	897.93	1.75
87-1	134.1	61.7	683.98	879.92	1.47
87-2	132.0	62.2	703.32	897.63	0.95
87-3	128.0	62.6	707.99	898.70	0.46
87-4	126.2	61.6	713.60	901.45	0.39



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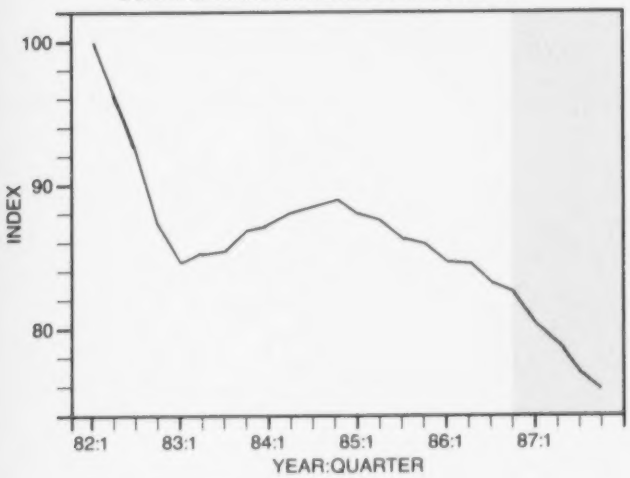

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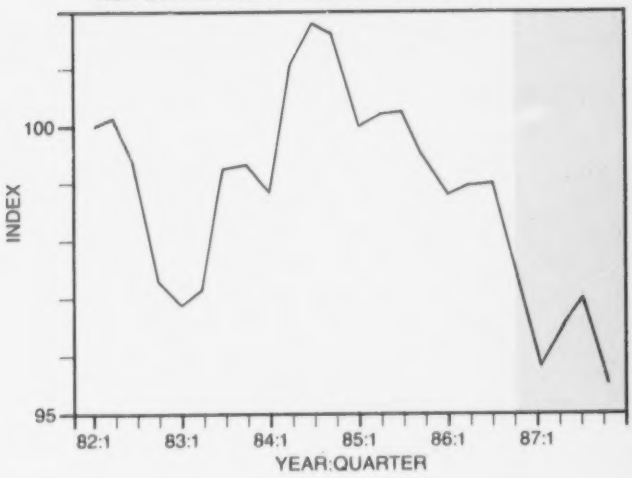

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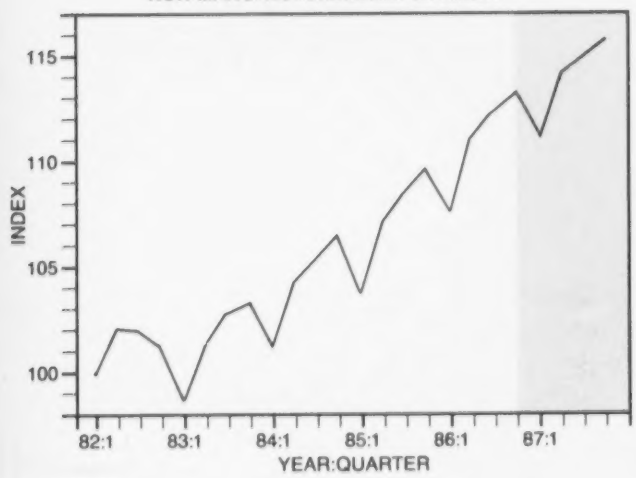
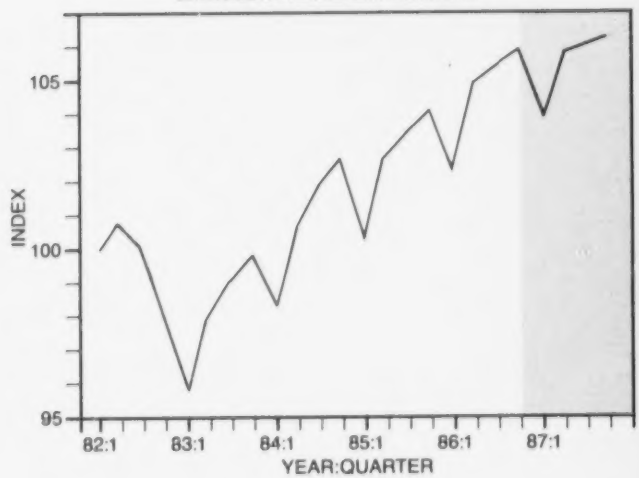


CHANGE IN TOTAL EMPLOYMENT



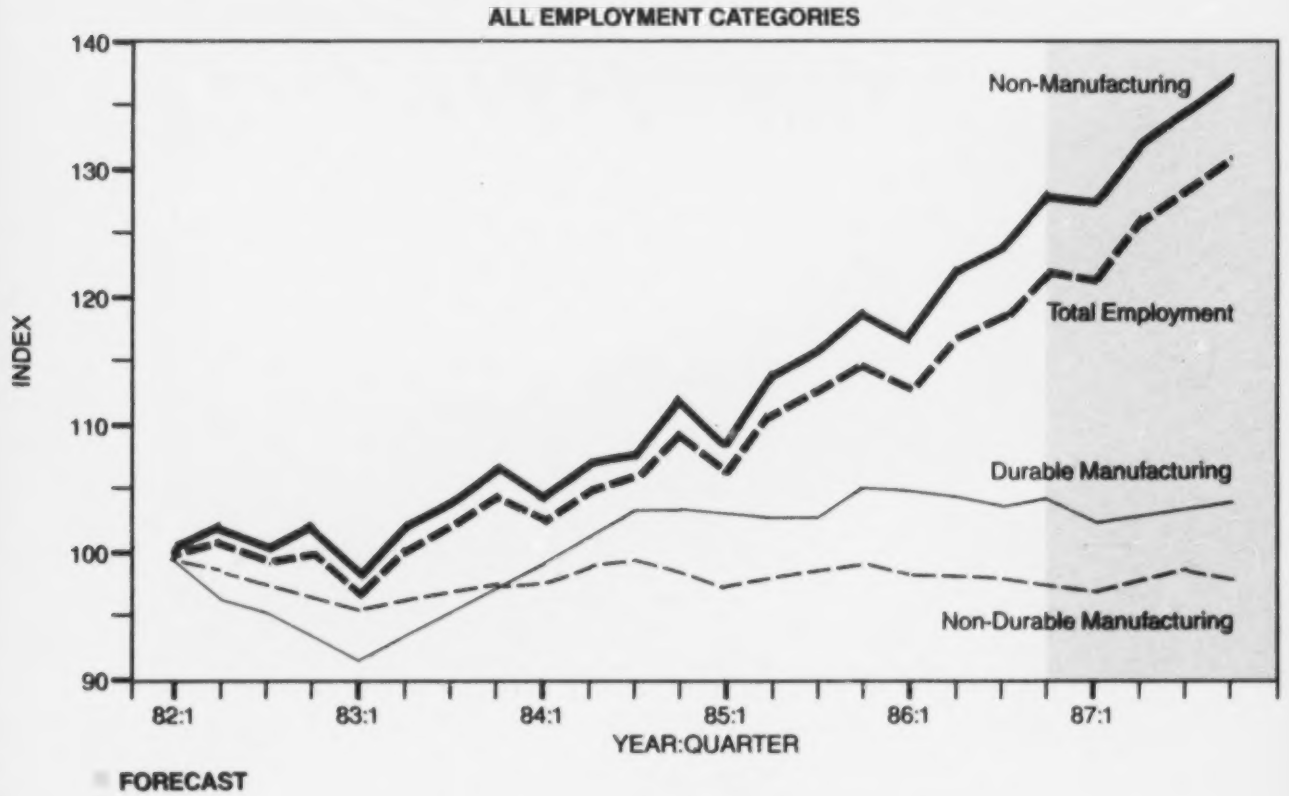
FORECAST

COLUMBUS:

Employment Forecast for 1987

(Table in thousands)

Date	Durable Manufacturing	Non-Durable Manufacturing	Non-Manufacturing	Total Employment	Percent Change Over a Year Ago
85-1	69.96	35.3	479.33	584.60	
85-2	70.00	35.6	499.53	605.16	
85-3	70.23	35.8	502.46	608.50	
85-4	70.90	35.9	520.76	627.60	
86-1	70.53	35.7	515.13	621.36	
86-2	69.60	35.7	535.96	641.33	
86-3	69.36	35.8	540.26	645.50	
forecast starts here					
86-4	69.73	35.6	560.14	665.57	6.05
87-1	68.50	35.2	558.39	662.13	6.56
87-2	68.65	35.6	580.61	684.92	6.79
87-3	69.07	35.8	590.01	694.98	7.66
87-4	69.56	35.7	601.81	707.10	6.23



DURABLE MANUFACTURING EMPLOYMENT
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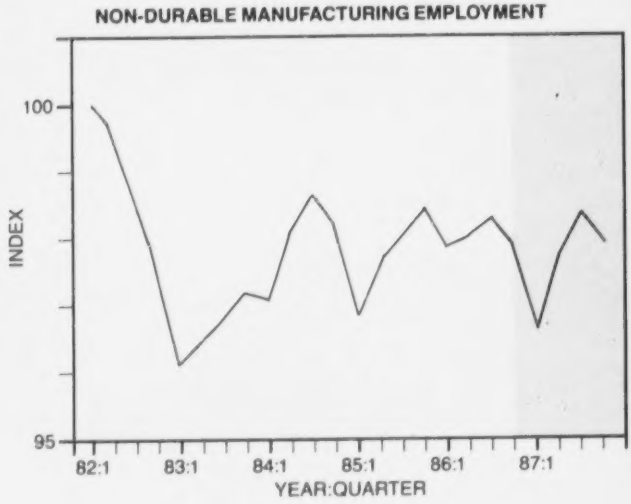
YEAR:QUARTER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83:1
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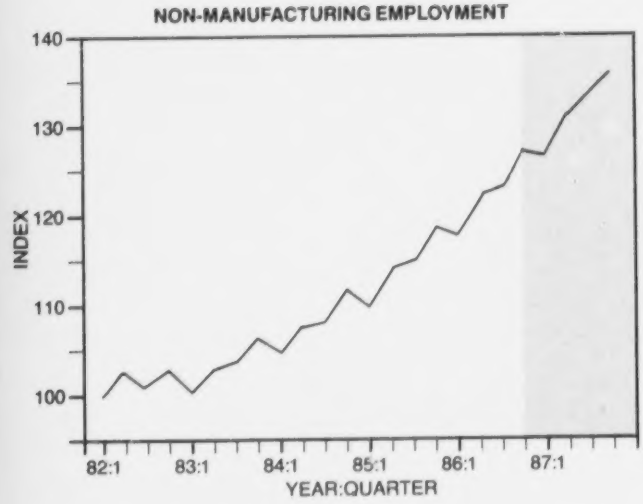
86:1
87:1
YEAR:QUARTER


NON-MANUFACTURING EMPLOYMENT
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YEAR:QUARTER

CHANGE IN TOTAL EMPLOYMENT
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85:1
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YEAR:QUARTER

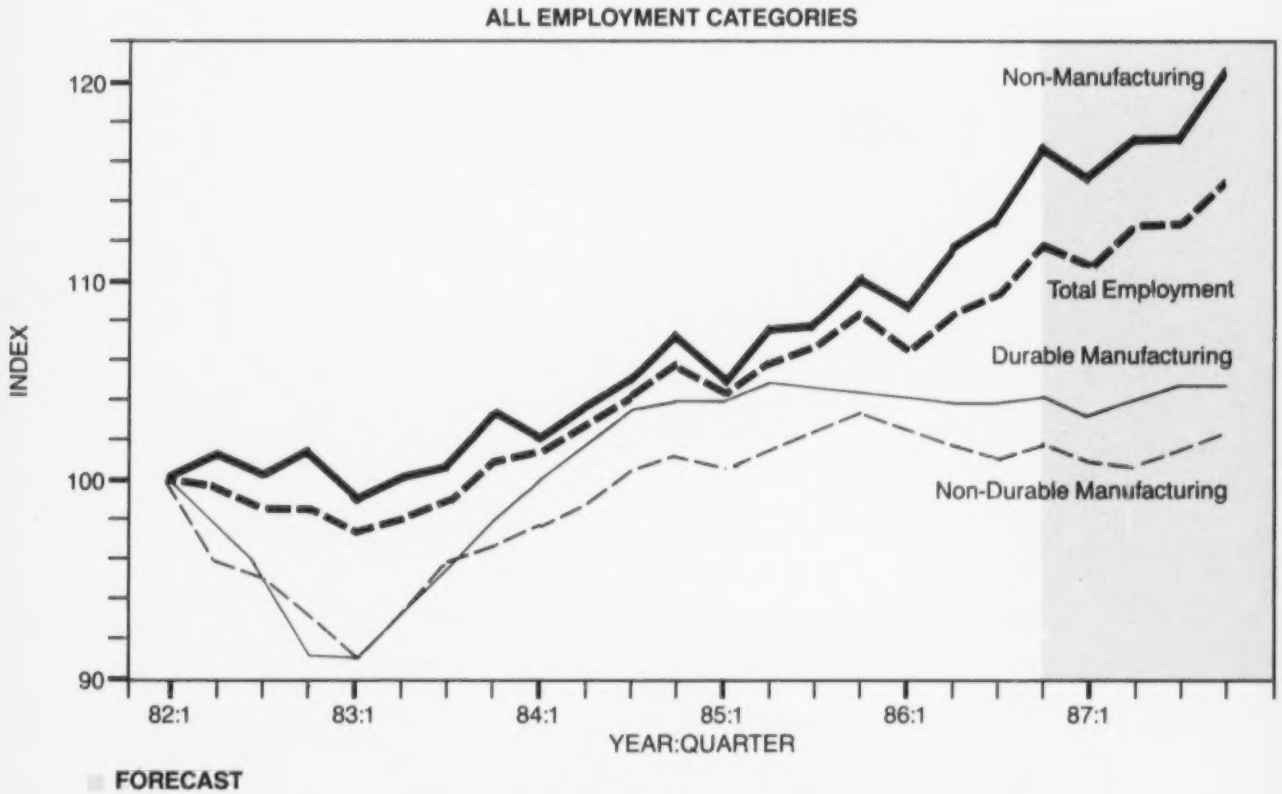
FORECAST

DAYTON:

Employment Forecast for 1987

(Table in thousands)

Date	Durable Manufacturing	Non-Durable Manufacturing	Non-Manufacturing	Total Employment	Percent Change Over a Year Ago
85-1	76.90	28.7	292.03	397.66	
85-2	77.70	28.9	301.13	407.73	
85-3	77.56	29.2	302.06	408.83	
85-4	77.16	29.5	310.30	417.00	
86-1	76.13	29.3	305.23	410.70	
86-2	75.60	29.0	314.70	419.33	
86-3	75.60	28.8	317.53	421.96	
forecast starts here					
86-4	75.74	29.1	325.26	430.13	3.14
87-1	75.22	28.7	320.68	424.66	3.39
87-2	75.84	28.6	327.87	432.40	3.11
87-3	76.51	28.9	327.53	432.97	2.60
87-4	76.77	29.1	333.84	439.80	2.24



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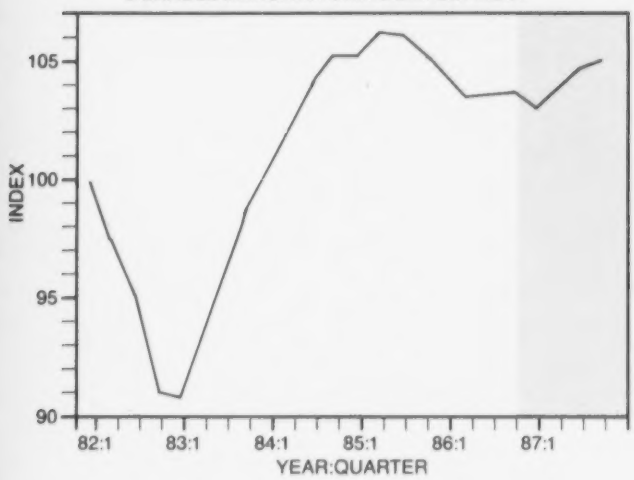

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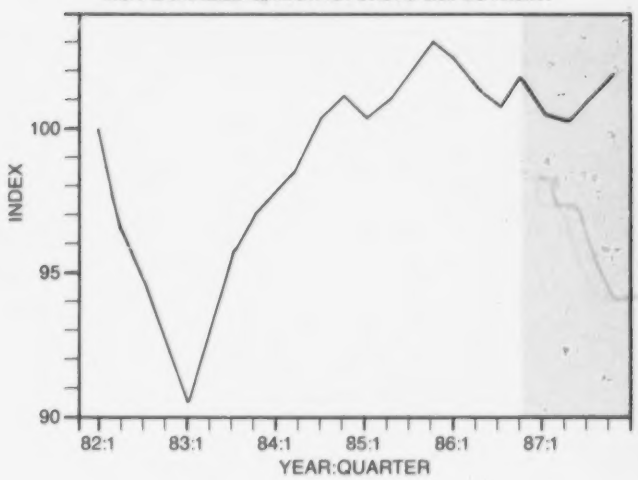

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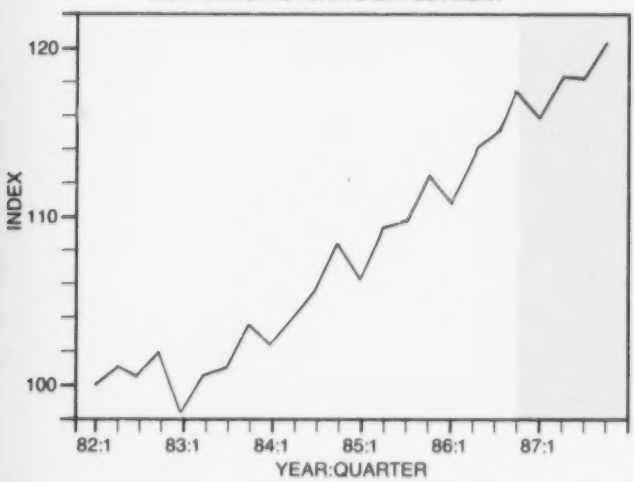
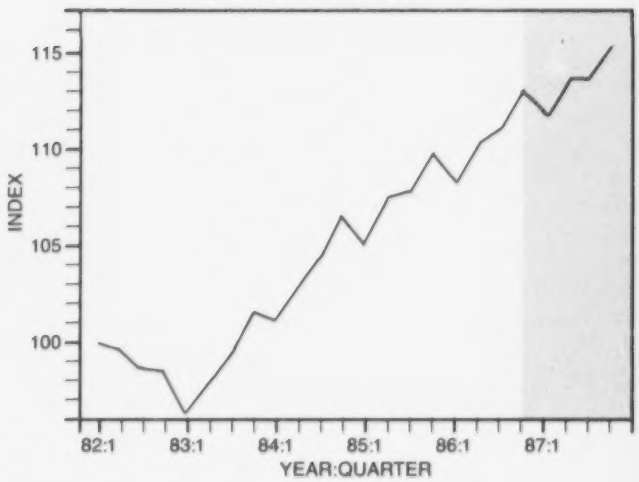


CHANGE IN TOTAL EMPLOYMENT



FORECAST

TOLEDO:

Employment Forecast for 1987

(Table in thousands)

Date	Durable Manufacturing	Non-Durable Manufacturing	Non-Manufacturing	Total Employment	Percent Change Over a Year Ago
85-1	51.10	13.6	192.40	257.10	
85-2	50.96	13.8	198.20	263.03	
85-3	52.10	14.3	197.93	264.33	
85-4	52.70	13.6	206.70	273.03	
86-1	50.13	13.9	201.73	265.83	
86-2	48.20	14.1	208.73	271.03	
86-3	48.00	15.0	209.16	272.16	
forecast starts here					
86-4	48.62	14.7	217.19	280.54	2.75
87 1	47.13	14.4	212.52	274.06	3.09
87-2	46.55	14.3	218.13	278.99	2.93
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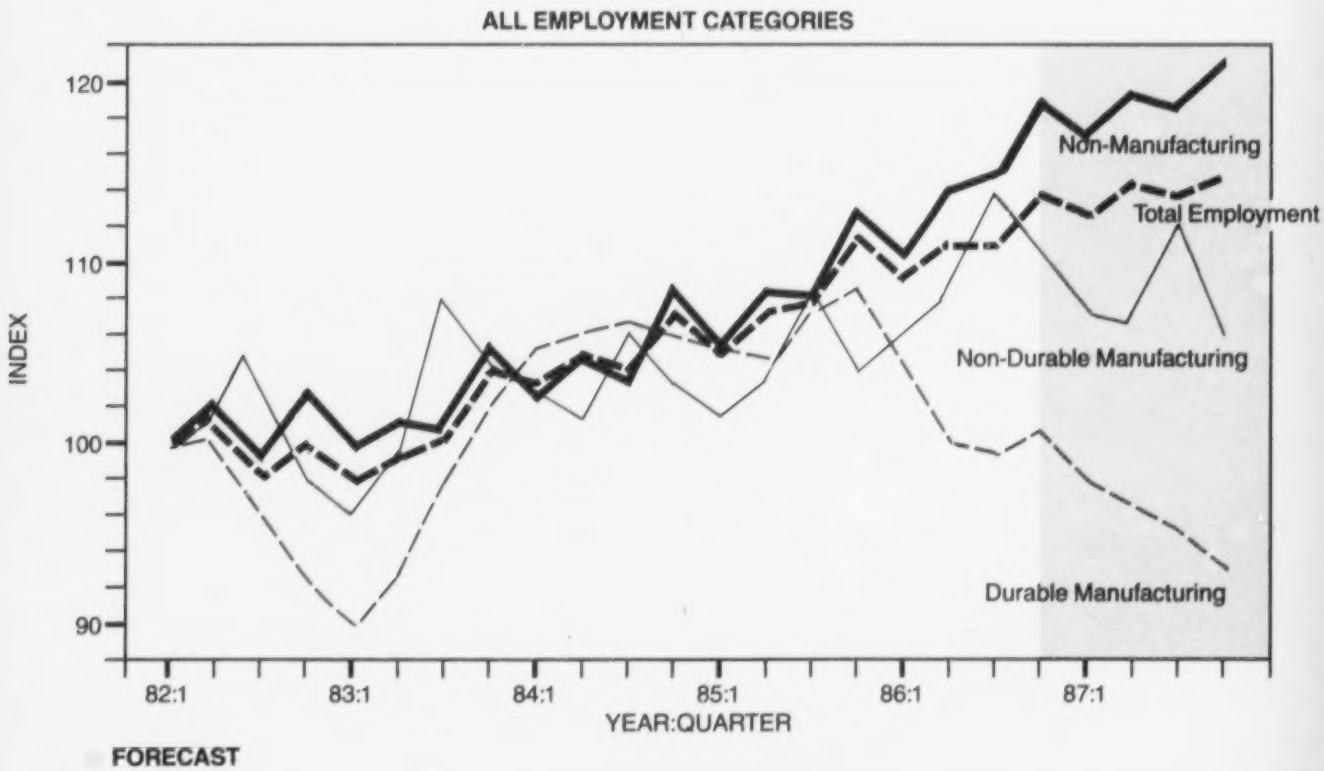
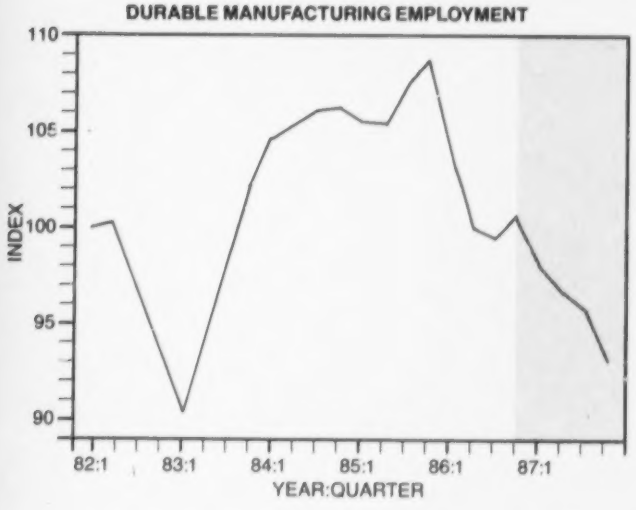
87-4	44.79	13.8	221.33	280.01	– 0.18




DURABLE MANUFACTURING EMPLOYMENT
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85:1
86:1
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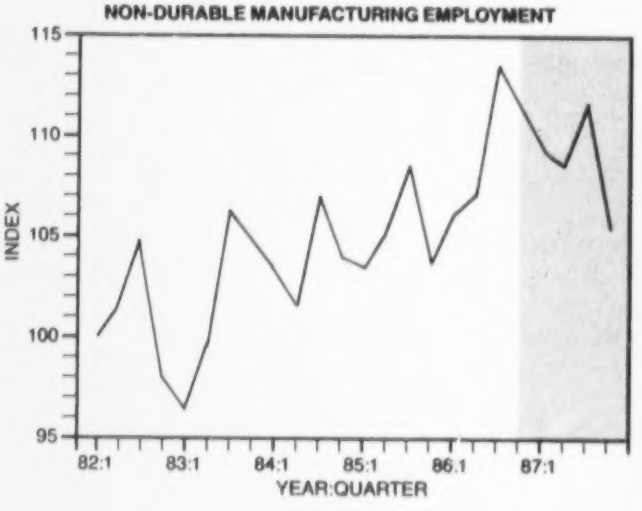
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82:1
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YEAR:QUARTER

NON-MANUFACTURING EMPLOYMENT
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82:1
83:1
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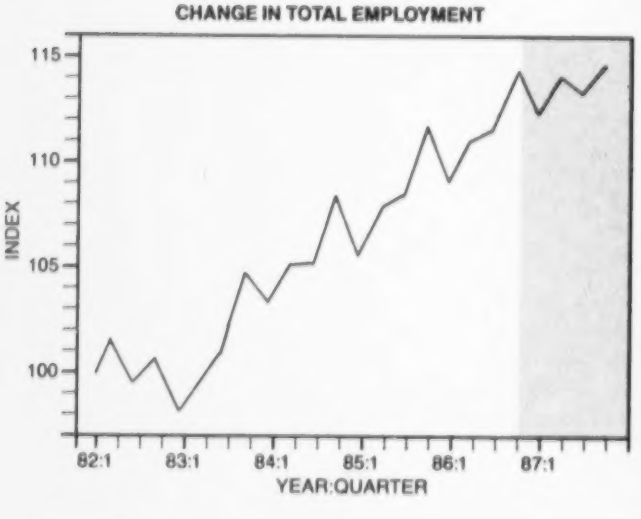
85:1
86:1
87:1
YEAR:QUARTER


CHANGE IN TOTAL EMPLOYMENT
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82:1
83:1
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86:1
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YEAR:QUARTER

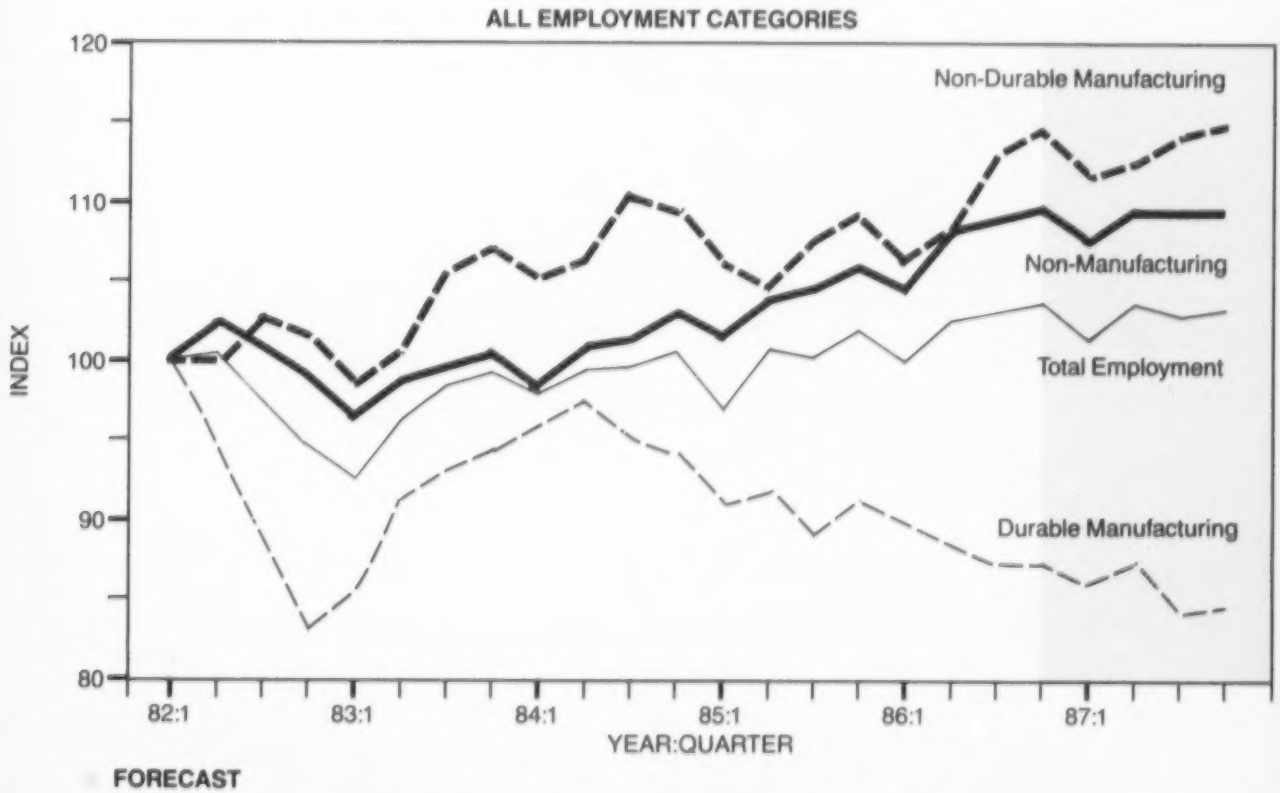
FORECAST

YOUNGSTOWN:

Employment Forecast for 1987

(Table in thousands)

Date	Durable Manufacturing	Non-Durable Manufacturing	Non-Manufacturing	Total Employment	Percent Change Over a Year Ago
85-1	47.53	5.16	126.36	179.06	
85-2	47.73	5.10	131.80	184.63	
85-3	46.40	5.26	132.26	183.93	
85-4	47.66	5.33	134.96	187.96	
86-1	46.96	5.13	131.86	183.96	
86-2	46.40	5.30	137.63	189.33	
86-3	45.93	5.56	138.40	189.90	
forecast starts here					
86-4	45.91	5.62	139.24	190.78	1.50
87-1	44.65	5.40	135.29	185.35	0.75
87-2	45.36	5.47	139.57	190.41	0.57
87-3	43.92	5.60	139.23	188.76	−0.60
87-4	44.04	5.62	139.46	189.13	−0.86



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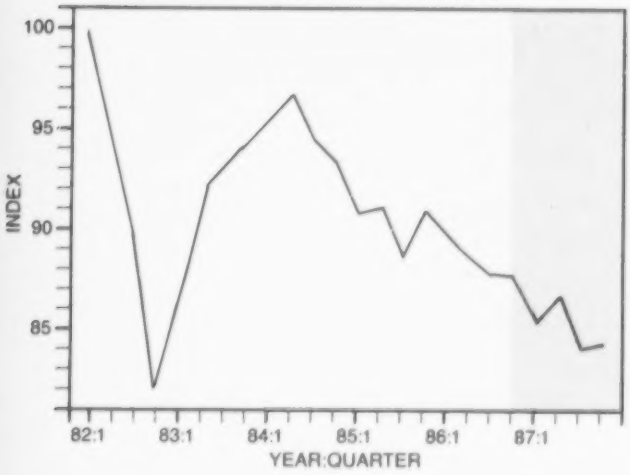

NON-DURABLE MANUFACTURING EMPLOYMENT

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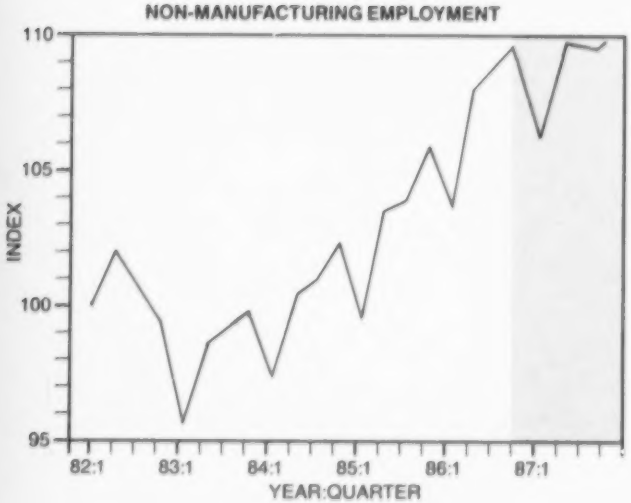

CHANGE IN TOTAL EMPLOYMENT

FORECAST

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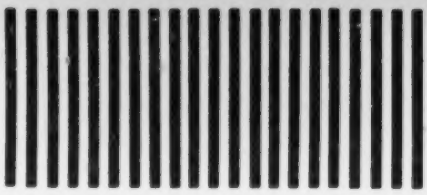

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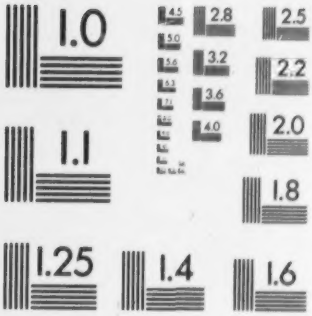

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